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Oregon

SEP 02 1997

ASH GROVE COMPANY  
13939 N. RIVERGATE BLVD  
PORTLAND, OR 97203

SEP 5 1997  
OFFICE OF AIR

DEPARTMENT OF  
ENVIRONMENTAL  
QUALITY

NORTHWEST REGION

RE: ISSUANCE OF AIR  
CONTAMINANT DISCHARGE  
PERMIT NO. 26-1891

The Department of Environmental Quality has completed processing your application for an Air Contaminant Discharge Permit. Based on the material contained in the application we have issued the enclosed permit.

The effective date of the permit is the date it was signed by the Regional Administrator. The signature and date appear on the first page of the document. The permit is issued pursuant to Oregon Revised Statutes 468A and Oregon Administrative Rules (OAR) 340-14-005 through 340-14-050, and 28-1700 through 28-1790.

You may appeal conditions or limitations contained in the attached permit by applying to the Environmental Quality Commission, or its authorized representative, within twenty days from the date of this letter. Appeals are pursuant to ORS Chapter 183 and OAR Chapter 340, Division 14-025(6). Appeal procedures are contained in OAR Division 11-005 through 11-140.

A copy of the current permit must be available at the facility at all times (Condition G2). Failure to comply with permit conditions may result in civil penalties. You are expected to read the permit carefully and comply with all conditions to protect the environment of Oregon.

If you have any questions, please contact Beth Moore at (503) 229-5586.

Sincerely,

*Audrey M. O'Brien*

Audrey O'Brien  
Air Quality Manager  
Northwest Region

John A. Kitzhaber  
Governor



AOB:slh  
Enclosure

cc: Terri Sylvester/AQ  
EPA - Region X  
B Moore/NWR

2020 SW Fourth Avenue  
Suite 400  
Portland, OR 97201-4987  
(503) 229-5263 Voice  
TTY (503) 229-5471  
DEQ-1

USEPA REG



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AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality  
Northwest Region  
2020 SW 4th, Suite 400  
Portland, Oregon 97201-5884  
Telephone: (503) 229-5263

Issued in accordance with the provisions of ORS 468A.040 and based on the land use compatibility findings included in the permit record.

ISSUED TO:

Ash Grove Cement Company  
13939 N. Rivergate Blvd.  
Portland, OR 97203

INFORMATION RELIED UPON:

Application No.: 16045  
Date received: 01/29/97


PLANT SITE LOCATION:

13939 N. Rivergate Blvd.  
Portland, OR 97203

LAND USE COMPATIBILITY STATEMENT:

From: City of Portland  
Dated: January 7, 1997

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY:

  
Tom Bispham, Northwest Region Administrator

SEP 02 1997

Dated

Source(s) Permitted to Discharge Air Contaminants:

TYPE OF FACILITY

(from Table 4, OAR 340-28-1750)

40. Lime Manufacturing  
I. (G) Synthetic Minor

STANDARD INDUSTRY CODE

3274

## PERMITTED ACTIVITIES

The permittee is herewith allowed to discharge exhaust gases from those processes and activities directly related to or associated with the air contaminant source(s) listed above in accordance with the requirements, limitations, and conditions of this permit, until such time as this permit expires or is modified or revoked.

Compliance with the specific requirements, limitations and conditions contained herein does not relieve the permittee from complying with all other laws, rules and standards administered by the Department, nor does it allow significant levels of emissions of air contaminants not limited in this permit or contained in the permit application.

## PERFORMANCE STANDARDS AND EMISSION LIMITS

1. The permittee shall at all times maintain and operate all air contaminant generating processes and all air contaminant control equipment at full efficiency and effectiveness, such that the emissions of air contaminants are kept at the lowest practicable levels.
2. Particulate emissions from any single air contaminant source shall not exceed any of the following:
  - a. 0.2 grains per standard cubic foot for sources existing prior to June 1, 1970;
  - b. 0.1 grains per standard cubic foot for sources installed, constructed, or modified after June 1, 1970; and
  - c. 0.01 grains per standard cubic foot for the main baghouses on Kiln Nos. 1,2,3 and Roller Mill/Dryer Nos. 1,2,3,& 4.
  - d. 0.02 grains per standard cubic foot for all other baghouses.
  - e. An opacity equal to or greater than twenty percent (20%) for a period aggregating more than thirty (30) seconds in any one (1) hour, excluding uncombined water vapor.
3. Particulate matter which is larger than 250 microns and which may be deposited upon the real property of another person shall not be emitted.
  - a. The permittee shall not allow the emission of odorous matter or other fugitive emissions so as to create nuisance conditions off the permittee's property. Nuisance conditions will be verified by Department personnel. The creation of nuisance conditions may, in addition to any other action the Department may take, result in a permit modification to require a compliance schedule to control the nuisance conditions.
4. The permittee shall minimize fugitive dust emissions by:
  - a. Treating vehicular traffic areas of the plant site under the control of the permittee.
  - b. Storing collected material from air pollution control equipment in a covered container or other method equally effective in preventing the material from becoming airborne during storage and transfer.

PLANT SITE EMISSION LIMITS

5. Emissions of fugitive Particulate Matter on a plant site basis shall not exceed 26.0 tons per year. Compliance with this limit shall be based on the following calculation: ((amount of limestone rock received x 0.064 lb of particulate/ton of limestone + amount of dolomitic rock received x 0.023 lb of particulate/ton of dolomitic rock) ÷ 2000 lb/ton).

6. Prior to eliminating emissions from the preheater stacks on Kiln No. 1, recycling Kiln No. 1 cooler stack emissions, and the completion of the Kiln Nos. 1 & 2 scraper hood baghouse, the emission of Non-fugitive Particulate on a plant site basis shall not exceed 64.0 tons per year or 15.1 tons per month. Compliance with this limit shall be based on the following calculation:

((tons of quicklime produced x 0.052 lb particulate/ton of quicklime produced + tons of quicklime from Kiln Nos. 2 & 3 x 0.26 lbs particulate/ton of quicklime + tons of quicklime from Kiln No. 1 x 0.9 lbs particulate/ton of quicklime) + (tons of agricultural lime produced x 0.081 lb particulate/ton of agricultural lime) + (tons of hydrated lime produced x 1.46 lb particulate/ton of hydrated lime)) ÷ 2000 lb/ton.

7. Prior to eliminating emissions from the preheater stacks on Kiln No. 1, recycling Kiln No. 1 cooler stack emissions, and after the completion of the Kiln Nos. 1 & 2 scraper hood baghouse, the emission of Non-fugitive Particulate on a plant site basis shall not exceed 64.0 tons per year or 15.1 tons per month. Compliance with this limit shall be based on the following calculation:

((tons of quicklime produced x 0.052 lb particulate/ton of quicklime produced + tons of quicklime from Kiln Nos. 2 & 3 x 0.27 lbs particulate/ton of quicklime + tons of quicklime from Kiln No. 1 x 0.93 lbs particulate/ton of quicklime) + (tons of agricultural lime produced x 0.081 lb particulate/ton of agricultural lime) + (tons of hydrated lime produced x 1.46 lb particulate/ton of hydrated lime)) ÷ 2000 lb/ton.

8. After eliminating emissions from the preheater stacks on Kiln No. 1, recycling Kiln No. 1 cooler stack emissions, and the completion of the Kiln Nos. 1&2 scraper hood baghouse, the emission of Non-fugitive Particulate on a plant site basis shall not exceed 64.0 tons per year or 15.1 tons per month. Compliance with this limit shall be based on the following calculation:

((tons of quicklime produced x 0.052 lb particulate/ton of quicklime produced + tons of quicklime from Kiln Nos. 1, 2& 3 x 0.27 lbs particulate/ton of quicklime) + (tons of agricultural lime produced x 0.081 lb particulate/ton of agricultural lime) + (tons of hydrated lime produced x 1.46 lb particulate/ton of hydrated lime)) ÷ 2000 lb/ton.

9. Prior to eliminating emissions from the preheater stacks on Kiln No. 1, emissions of Sulfur Dioxide on a plant site basis shall not exceed 76.0 tons per year or 13.0 tons per month. Compliance with this limit shall be based on the following calculation: ((tons of quicklime produced by Kiln No.1 x 1.03 lb SO<sub>2</sub>/ ton of quicklime + tons of quicklime produced by Kiln Nos. 2 & 3 x 0.89 lbs SO<sub>2</sub>/ ton of quicklime) + (tons of agricultural lime produced x 0.0042 lbs SO<sub>2</sub>/ton of agricultural lime)) ÷ 2000 lb/ton.

After the emissions from the preheater stacks on Kiln No. 1 have been eliminated, compliance with this limit shall be based upon the following calculation: ((tons of quicklime produced by Kiln Nos. 1, 2 & 3 x 0.89 lbs SO<sub>2</sub>/ton of quicklime) + (tons of agricultural lime produced x 0.0042 lbs SO<sub>2</sub>/ton of agricultural lime)) ÷ 2000 lb/ton.

10. Prior to eliminating emissions from the preheater stacks on Kiln No. 1, emissions of Nitrogen Oxides (NO<sub>x</sub>) on a plant site basis shall not exceed 50.0 tons per year or 5.8 tons/month. Compliance with this limit shall be based on the following calculation:  $((\text{tons of quicklime produced from Kiln No. 1} \times 1.24 \text{ lbs NO}_x/\text{ton of quicklime} + \text{tons of quicklime produced from Kiln No. 2} \times 0.48 \text{ lbs NO}_x/\text{ton of quicklime} + \text{tons of quicklime produced from Kiln No. 3} \times 0.63 \text{ lbs NO}_x/\text{ton of quicklime}) + (\text{tons of agricultural lime produced} \times 0.017 \text{ lbs NO}_x/\text{ton of agricultural lime})) \div 2000 \text{ lb/ton.}$

After the emissions from the preheater stacks on Kiln No. 1 have been eliminated, compliance with this limit shall be based on the following calculation:  $((\text{tons of quicklime produced from Kiln Nos. 1 \& 2} \times 0.48 \text{ lbs NO}_x/\text{ton of quicklime} + \text{tons of quicklime produced from Kiln No. 3} \times 0.63 \text{ lbs NO}_x/\text{ton of quicklime}) + (\text{tons of agricultural lime produced} \times 0.017 \text{ lbs NO}_x/\text{ton of agricultural lime})) \div 2000 \text{ lb/ton.}$

11. Prior to eliminating emissions from the preheater stacks on Kiln No. 1, emissions of Carbon Monoxide (CO) on a plant site basis shall not exceed 63.0 tons per year or 21.0 tons/month. Compliance with this limit shall be based on the following calculation:  $((\text{tons of quicklime produced by Kiln No. 1} \times 1.13 \text{ lbs CO/ton of quicklime} + \text{tons of quicklime produced by Kiln No. 2} \times 0.49 \text{ lbs CO/ton of quicklime} + \text{tons of quicklime produced by Kiln No. 3} \times 0.94 \text{ lbs CO/ton of quicklime}) + (\text{tons of agricultural lime produced} \times 0.0213 \text{ lbs CO/ton of agricultural lime})) \div 2000 \text{ lb/ton.}$

After the emissions from the preheater stacks on Kiln No. 1 have been eliminated, compliance with this limit shall be based on the following calculation:  $((\text{tons of quicklime produced from Kiln Nos. 1 \& 2} \times 0.49 \text{ lbs CO/ton of quicklime} + \text{tons of quicklime produced from Kiln No. 3} \times 0.94 \text{ lbs CO/ton of quicklime}) + (\text{tons of agricultural lime produced} \times 0.0213 \text{ lbs CO/ton of agricultural lime})) \div 2000 \text{ lb/ton.}$

12. Prior to eliminating emissions from the preheater stacks on Kiln No. 1, emissions of Volatile Organic Compounds (VOC) on a plant site basis shall not exceed 5.0 tons per year or 0.9 tons/month. Compliance with this limit shall be based on the following calculation:  $((\text{tons of quicklime produced by Kiln No. 1} \times 0.064 \text{ lbs VOC/ton of quicklime} + \text{tons of quicklime produced by Kiln No. 2} \times 0.05 \text{ lbs VOC/ton of quicklime} + \text{tons of quicklime produced by Kiln No. 3} \times 0.02 \text{ lbs VOC/ton of quicklime}) + (\text{tons of agricultural lime produced} \times 0.006 \text{ lbs VOC/ton of agricultural lime})) \div 2000 \text{ lb/ton.}$

After the emissions from the preheater stacks on Kiln No. 1 have been eliminated, compliance with this limit shall be based on the following calculation:  $((\text{tons of quicklime produced from Kiln Nos. 1 \& 2} \times 0.05 \text{ lbs VOC/ton of quicklime} + \text{tons of quicklime produced from Kiln No. 3} \times 0.02 \text{ lbs VOC/ton of quicklime}) + (\text{tons of agricultural lime produced} \times 0.006 \text{ lbs VOC/ton of agricultural lime})) \div 2000 \text{ lb/ton.}$

#### SYNTHETIC MINOR CONDITIONS

13. The annual production of quicklime, agricultural lime and hydrated lime, along with the annual amount of limestone and dolomitic rock received by barge and handled as a raw material, shall be limited such that the emissions from the facility do not exceed the annual PSEL in Conditions Nos. 5 through 12. Compliance with this limit shall be determined by using the mathematical expressions set forth in Condition Nos. 5 through 12.

If the permittee anticipates that future emission levels of criteria pollutants, excluding emissions which occur during excess emission incidents allowed under OAR 340-28-1400 through 1460, will exceed the trigger levels for the Title V Federal Operating Permit program, the permittee shall follow the procedures outlined in OAR 340-28-1740(5) or (6) to apply for a Federal Operating Permit.

14. The concentration of halogens in the on-specification or off-specification used oil that is fired shall not exceed 1575 ppm.

#### AIR POLLUTION EPISODES

15. The permittee may elect to file a Source Emission Reduction Plan (SERP) with the Department in accordance with OAR 340-27-015, specifying the procedures the permittee will follow in the event an Air Pollution Alert, Warning, or Emergency Episode is declared in the Portland area by the Department. The Source Emission Reduction Plan shall be available on the source premises for inspection by any authorized personnel.
16. In the event an Air Pollution Alert, Warning, or Emergency Episode is declared in the Portland area by the Department, the permittee shall take actions appropriate to the declared Air Pollution Episode as listed in the Source Emission Reduction Plan on file with the Department, or with Oregon Administrative Rules 340, Division 27 "Air Pollution Emergencies" if no Source Emission Reduction Plan has been filed with the Department.

Air Pollution Episodes will be declared by the Department and information will be made available through the radio and television media.

#### SOURCE TESTING REQUIREMENTS

17. Within 90 days of permit issuance, the permittee shall conduct a source test for SO<sub>2</sub> and HCl on Kiln No. 3 and particulate on Roller Mill/Dryer No. 4. The source test for Roller Mill/Dryer No. 4 will be conducted while operating at maximum capacity.

The source test for Kiln No. 3 will be conducted while operating at maximum capacity and while firing 1% sulfur waste oil. The source test for SO<sub>2</sub> shall consist of three one hour test runs using Method 6c at the outlet of the main baghouse. Concurrent with the source test for SO<sub>2</sub> the permittee shall conduct a source test for HCl on Kiln No. 3. The source test for HCl shall consist of three one hour test runs using Method 26a at the outlet of the main baghouse while burning waste oil with chlorine containing compounds.

- a. All tests shall be conducted in accordance with the testing procedures on file at the Department and with the pretest plan submitted at least 15 days in advance and approved by the Source Test Coordinator in the Northwest Region of the Department in Portland (unless otherwise notified). All test data and results shall be submitted for review to the Source Test Coordinator within 45 days after testing.
- b. Only regular operating staff may adjust the combustion system and emission control parameters during the source performance tests and within two (2) hours prior to the tests. Any operating adjustments made during the source performance tests, which are a result of consultation during the tests with source testing personnel, equipment vendors or consultants, may render the source performance test invalid.
- c. During the source test the following parameters should be monitored and recorded such that the information can be related to each one hour test:

- i. process operating parameters during the emissions source test which include the raw material feed rates, the amount and type of lime produced, the amount and type of fuel used, analysis of the fuel and limestone for percent sulfur, analysis of the fuel for ppm HCl, operating temperatures, and a copy of the operator's log.
- ii. operating parameters of emission control equipment, including but not limited to pressure drop across the baghouse, baghouse cleaning cycle, and number of compartments in operation.

#### SPECIAL CONDITIONS

18. The concentration of arsenic (As) in the used oil that is fired shall not exceed 4.8 ppm.
19. The concentration of lead (Pb) in the used oil that is fired shall not exceed 100 ppm.
20. The concentration of Cadmium (Cd) in the used oil that is fired shall not exceed 2 ppm.
21. The concentration of Chromium (Cr) in the used oil that is fired shall not exceed 10 ppm.
22. The concentration of polychlorinated biphenyl (PCB) in the used oil that is received shall not exceed 49 ppm.
23. The permittee shall not use any on-specification or off-specification fuel oil containing more than 1.0 percent sulfur by weight.
24. The permittee shall only burn natural gas in the Roller Mill/Dryers.

#### MONITORING REQUIREMENTS

25. The permittee shall effectively inspect and monitor the operation and maintenance of the plant and associated air contaminant control facilities and shall implement the procedures necessary to monitor and record the following parameters. A record of all such data shall be maintained in a separate log for a period of two years at the plant site for inspection by the authorized representatives of the Department.
  - a. All operating and production parameters to be reported to the Department annually as required in Condition 27.
  - b. Excess emissions records as defined in OAR 340-28-1400 through 340-28-1440 (recorded on occurrence).
  - c. A description of any maintenance to the air contaminant control system (recorded on occurrence).
  - d. The permittee shall monitor the use of on specification and off-specification used oil by conducting the Ash Grove Cement Company, Rivergate Plant, Used Oil Sampling Program dated November 17, 1994 and the sampling and analysis requirements listed below:
    - i. Any changes to the sampling program shall be submitted to the Department for approval.
    - ii. The permittee shall obtain a written certification from the supplier that the waste is not a listed and/or characteristic hazardous waste as defined by 40 CFR Part 266.
    - iii. The permittee shall analyze a composite sample of off-specification used oil for PCB's from full load deliveries after every four loads received at the facility or at a minimum of once per quarter.

- iv. The permittee shall analyze the composite sample of off-specification oil for PCB's from smaller quantity loads on a quarterly basis.
- v. The permittee shall sample the fuel such that the sample is representative of the fuel used in combustion, and analyze for arsenic, cadmium, chromium, lead, halogens and % sulfur on a quarterly basis.
- vi. The amount of oil in each delivery shall be recorded.
- e. The amount of limestone rock and dolomitic rock received on a monthly basis.
- f. The amount of quicklime produced on a weekly basis.
- g. The amount of agricultural lime produced on a weekly basis.
- h. The amount of hydrate produced on a weekly basis.
- i. The amount of off-specification fuel used to produce the quicklime on a monthly basis.
- j. The amount and type of fuel used to produce the agricultural lime and quicklime on a monthly basis.
- k. Calculate, on a monthly basis, the total particulate, SO<sub>2</sub>, NO<sub>x</sub>, CO and VOC emissions using the mathematical expressions in Condition Nos.5 through 12.

#### REPORTING REQUIREMENTS

- 26. The permittee shall submit to the Department by July 15 of each year this permit is in effect a letter certifying compliance status with these permit conditions for the first six months of the year. The letter shall include an explanation of permit condition that has not been complied with, the reason for not complying with the permit condition and the steps taken to correct the problem
- 27. The permittee shall submit to the Department by January 15 of each year the permit is in effect two (2) copies of the following information for the preceding calendar year:
  - a. Operating parameters:
    - i. Plant production of agricultural lime, quicklime, and hydrate on a monthly and annual basis (tons).
    - ii. Average plant operating schedule (hours/day, days/week, weeks/year).
    - iii. The amount, and type of fuel which is used to produce agricultural lime and quicklime on a monthly and annual basis (gallons, cubic feet).
    - iv. The amount of limestone rock received and handled (tons).
    - v. The results of the quarterly sampling for lead, cadmium, chromium, halogens, arsenic and PCB's (ppm) and percent sulfur of the fuel oil.
    - vi. The actual emissions of particulate, SO<sub>2</sub>, NO<sub>x</sub>, CO and VOC emissions as calculated in Condition Nos. 5 through 12.
    - vii. A log of all planned and unplanned excess emissions in accordance with OAR 340-28-1440.
    - viii. Explain any permanent changes made in the plant process or production which would effect air contaminant emissions, and indicate when changes were made.
    - ix. List all major maintenance performed on air pollution equipment.
    - x. The report shall be sent to the Northwest Region, 2020 SW 4th Ave., #400, Portland, Oregon 97201-5884 unless otherwise noted. The permit number must be prominently displayed on the report.



## FEE SCHEDULE

28. The Annual Compliance Determination Fee for this permit is due on June 1 of each year this permit is in effect. An invoice indicating the amount, as determined by Department regulations, will be mailed prior to the above date. The fee shall be submitted to the Business Office of the Department in Portland (unless otherwise notified).

## GENERAL CONDITIONS AND DISCLAIMERS

- G1. The permittee shall allow Department of Environmental Quality representatives access to the plant site and pertinent records at all reasonable times for the purposes of making inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emission discharge records and otherwise conducting all necessary functions related to this permit in accordance with ORS 468.095.
- G2. The permittee shall have available at the facility at all times a copy of the Air Contaminant Discharge Permit.
- G3. The permittee is prohibited from conducting open burning.
- G4. The permittee shall at all times conduct dust suppression measures to meet the requirements set forth in "Fugitive Emissions" and "Nuisance Conditions" in OAR 340-21-050 through 340-21-060 and in OAR 340-30-440.
- G5. The permittee shall immediately (i.e. as soon as possible but in no case more than one hour after the beginning of the excess emission period) notify the Department by telephone or in person of any excess emissions which are of a nature that could endanger public health, in accordance with OAR 340-28-1430. Follow-up reporting shall be made in accordance with Department direction and OAR 340-28-1430(3) and 340-28-1440.

Notification shall be made to the Department's Northwest Region office in Portland. The telephone number is 229-5263.

In the event of any excess emissions which are of a nature that could endanger public health and occur during nonbusiness hours, weekends, or holidays, the permittee shall immediately notify the Department by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.

- G6. The permittee shall notify the Department in writing using a Departmental "Notice of Construction" form, or "Permit Application Form", and obtain approval in accordance with OAR 340-28-800 through 340-28-820 before:
- a. Constructing or installing any new source of air contaminant emissions, including air pollution control equipment, or
  - b. Modifying or altering an existing source that may significantly affect the emission of air contaminants, or
  - c. Making any physical change which increases emissions, or

- d. Changing the method of operation, the process, or the fuel use, or increasing the normal hours of operation to levels above those contained in the permit application and reflected in this permit and which result in increased emissions.
- G7. Application for a modification of this permit must be submitted not less than 60 days prior to the source modification. A Filing Fee and an Application Processing Fee must be submitted with an application for the permit modification.
- G8. The permittee shall notify the Department in writing using a Departmental "Permit Application Form" within 60 days after the following:
- a. legal change of the registered name of the company with the Corporations Division of the State of Oregon, or
  - b. sale or exchange of the activity or facility.
- Applicable Permit Fees must be submitted with an application for the name change.
- G9. Application for renewal of this permit must be submitted not less than 60 days prior to the permit expiration date. A Filing Fee, an Application Processing Fee and an Annual Compliance Determination Fee must be submitted with the application for the permit renewal.
- 
- G10. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
- G11. This permit is subject to revocation for cause as provided in OAR 340-14-045.

ALL INQUIRIES SHOULD BE DIRECTED TO:

Department of Environmental Quality  
Northwest Region  
2020 SW 4th, Suite 400  
Portland, Oregon 97201-5884  
Telephone: (503) 229-5263

Department of Environmental Quality  
Northwest Region  
AIR CONTAMINANT DISCHARGE PERMIT APPLICATION REVIEW REPORT

Ash Grove Cement Company  
13939 N. Rivergate Blvd.  
Portland, OR 97203

PSEL CRED	SOURCE TEST	AMB MON	COMPL SCHED	SPEC COND	RPT FREQ	EXCESS RPT	NSPS	NSR	PSD	NESHAP	SIZE	PUBL NOTC
	X			X	S	Y			X		SM	X

#### GENERAL BACKGROUND INFORMATION

1. Ash Grove Cement Company operates a lime manufacturing facility which is located at 13939 North Rivergate Blvd., Portland. The process includes raw material handling and sizing of limestone and dolomite; using calcimatic kilns to produce chemical lime; hydrating lime to produce calcium hydroxide; and using roller mills/dryers to produce agricultural lime. The facility was established in 1964.
2. The facility is located in a nonattainment area for particulate and carbon monoxide. The facility is located in an air quality maintenance area for ozone. Two contributors to the formation of ozone, nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC), are regulated pollutants. The facility is a moderate source of particulate, CO, NO<sub>x</sub> and VOC.
3. A Land Use Compatibility Statement signed by the Bureau of Planning City of Portland Permit Center on January 7, 1997 states that the facility complies with local land use requirements.
4. Other permits have been issued or are required by the Department of Environmental Quality for this source include an NPDES permit for industrial water discharge. The facility is registered to burn off-specification oil in the calcimatic kilns (Registration No. ORD 027707256). Under this registration, the kilns are considered industrial furnaces. The facility is a conditionally exempt generator of hazardous waste.
5. Two enforcement actions were taken against this source since the last permit action. A Notice of Noncompliance NON AQ-NWR-96-157 was issued to the facility in November 1996 for exceeding the percent sulfur in the quarterly fuel samples. A Notice of Noncompliance NON-AQ-NWR-97-048 was issued to the facility in June 1997 for exceeding the annual PSEL for NO<sub>x</sub> by 0.3 tons and VOC by 0.1 tons.

## 6. Main sources of air contaminants at the facility consist of the following:

- a. Two calcimatic kilns Nos. 1 & 2 each with a Western Precipitator reverse air baghouse for emission control, installed 1963. Each kiln has increased production capacity. Each kiln is capable of producing 130 tons/day and a maximum of 5.4 tons/hr of quicklime.
- b. One calcimatic kiln No. 3 with a Fuller plenum pulse baghouse for emission control, started operation in 1979. The kiln has an increased production capacity of 9.2 tons/hr on average and 9.7 ton/hr maximum.
- c. One Kritzer continuous hydrator with a Ducon wet scrubber for emission controls, installed 1973. The capacity of the hydrator has been increased to 4.2 tons/hr on average and 5.5 ton/hr maximum.
- d. For the hydrating process there are three baghouses: 1) a REES hydrate bag dust collector(large), 2) An American Air Filter hydrate loading baghouse and 3) A REES hydrate dust collector(small).
- e. Three CE Raymond Roller Mills and dryers each with a Micro Pul pulse jet baghouse for emission control which were installed in 1986. The Roller Mill/Dryers have an increased production capacity of 19 tons/hr on average and 31 ton/hr maximum.
- f. A fourth Roller Mill/Dryer will be installed in 1997. Roller Mill/Dryer No. 4 has a production capacity of 27 tons/hr on average and 45 ton/hr max.
- g. The coal/lime bin storage which is controlled by a Torit dust collector (Bin #7).
- h. Fugitives from raw material handling and stock piles.

A more detailed list of emission sources can be found in the attached detail sheets.

## 7. Source Test Information:

SOURCE	TEST DATE	PRODUCTION/STEAMING RATE DURING TEST	PARTICULATE RESULTS
Cooler Stacks	10/74	4 tons/hr	run1 0.089 gr/scf
			run2 0.083 gr/scf
			run3 0.066 gr/scf
			run4 0.059 gr/scf
Kiln No. 3	6/79	Not Available	run1 0.031 gr/scf
			run2 0.021 gr/scf
Kiln No. 3	7/79	Not Available	run1 0.022 gr/scf
			run2 0.011 gr/scf
			run3 0.025 gr/scf
Kiln No. 3	5/83	Not Available	run1 0.012 gr/scf
			run2 0.008 gr/scf
			run3 0.010 gr/scf

SOURCE	TEST DATE	PRODUCTION RATE DURING TEST	PARTICULATE RESULTS
Kiln No. 3	11/95	8.77 TPH	run1 0.0078 gr/scf
			run2 0.0111 gr/scf
			run3 0.0057 gr/scf
Kiln No. 2	11/95	3.75 TPH	run1 0.0063 gr/scf
			run2 0.0066 gr/scf
			run3 0.0110 gr/scf
Roller Mill/Dryer	11/95	22.8 TPH	run1 0.0028 gr/scf
			run2 0.0022 gr/scf
			run3 0.0013 gr/scf

SOURCE	TEST DATE	PRODUCTION RATE DURING TEST	SO2 PPH	NOX PPH	CO PPH	VOC PPH
Kiln No. 3	11/95	8.77 TPH	9.79	5.41	2.04	0.18
		fuel on-spec oil	1.70	5.4	2.17	0.11
			ND	5.55	2.46	0.06
Kiln No. 2	11/95	3.75 TPH	0.99	1.65	2.06	0.01
		fuel on-spec oil	0.93	1.46	0.91	0.20
			1.20	1.85	0.98	0.11
Roller Mill/Dryer	11/95	22.8 TPH	ND	0.35	0.52	0.15
		fuel natural gas	ND	0.38	0.34	0.11
			ND	0.39	0.34	0.11
PPH = lb/hr ND = Non Detect						

8. The permit is a modification of an existing Air Contaminant Discharge Permit which was issued on September 14, 1995 and Addendum No.1 which was issued on November 26, 1995. The modification is for increased production at the facility and the addition of a Roller Mill/Dryer for which the Notice of Construction NC# 16022 was received.

This permit also covers the changes proposed in NC#'s 015440 and 015989. The following modifications have been completed and are included in this permit: elimination of preheater stack B-7 and B-8 on Kiln No. 2 (NC# 015440), installation of a new Torit baghouse on Bin #8 (NC# 015440), adding the original baghouse from Bin #8 to the quicklime screws for control (NC#015440). The following modifications have not been completed and are accounted for in this permit: recycling cooler gases for Kiln No. 1 (NC# 015989), separate baghouse dust collectors for scraper hoods on Kiln No.1 and Kiln No. 2 (NC#015989), elimination of preheater stacks B-3 and B-4 on Kiln No. 1( NC# 015440).

## PLANT SITE EMISSION LIMIT (PSEL) INFORMATION

### ORIGINAL PLANT SITE EMISSION LIMIT

9. The operating schedule for the plant in the baseline year 1977 was 24 hrs/day x 7 days/wk x 52 wks/yr = 8736 hrs/yr. Actual operating hours varied depending on the process. The actual maximum operating hours were 8496 hours/yr.
10. Reported annual plant production for the baseline year 1977 was 64,409 tons of chemical lime(CaO) and 8,161 tons of hydrated lime(CaOH<sub>2</sub>); raw material use was 139,250 tons of limestone(CaCO<sub>3</sub>); and fuel use was 422,062,000 CF of natural gas and 213,134 gallons of distillate fuel.

The emission calculations are presented in Baseline Emission 1977 on the attached plant site emission detail sheets.

The baseline emission rate has been changed. The changes reflect the use of updated (5<sup>th</sup> ed.) AP-42 emission factors, emissions for paved and unpaved roads, actual emission data from the November 1995 stack test and the addition of emissions from Kiln No. 3.

The baseline emission rate is the average actual emission rate during the baseline period (1977 or 1978)[OAR 340-28-0110(13)]. For sources which had not yet begun normal operation but for which a permit was issued, the baseline emission limit includes the potential to emit of source. Potential to emit is defined as the maximum capacity of a stationary source to emit any pollutant under its physical operational design, which for Kiln No. 3 is based on the allowable PSD permit limits. The emissions for Kiln No. 3 were included in the baseline emission rate because a PSD Permit was issued for the operation of this equipment on October 26, 1977.

A February 14, 1979 inspection report indicates that Kiln No. 3 was installed. Kiln No. 3 was stack tested in July/August of 1979. A November 26, 1979 letter from T.R. Bispham, DEQ to Mr. W.K. Kistler, Superintendent of Ash Grove Cement Co. states that DEQ concurs with the emission test results pending EPA review. A 1980 letter from Donald R. Dubois, Regional Administrator, to W.A. Kistler, Superintendent of Ash Grove Cement Co. indicates that Class II Air Quality increments and the NAAQS will not be exceeded and the construction of Kiln No. 3 at 0.03 gr/dscf is BACT.

In the PSD permit issued on September 23, 1980, the PSEL has been raised after undergoing PSD analysis, therefore the emission levels that were modeled and not the baseline year emissions become the basis for determining whether the proposed increase is greater than the Significant Emission Rate. The baseline emission rates are adjusted to reflect this increase. The increase that was modeled is shown below:

1979	Particulate ton/yr	SOx* ton/yr
Kiln No. 3	37.8	32.9

\*SOx calculated using # 6 fuel oil with 1.55% sulfur for 315 days.

## HISTORY OF CHANGES TO THE PLANT SITE EMISSION LIMIT

11. The Plant Site Emission Limit for Particulate and SO<sub>2</sub> was increased in the ACDP issued in the following years.

- 1979 Kiln No. 3 was added
- 1982 the addition of coal as fuel, equipment for handling coal fuel and an increase in lime production
- 1985 the addition of three (3) roller mills and related equipment for agricultural lime production
- 1995 updated emissions inventory in connection with development of the Synthetic Minor Permit issued September 14, 1995. The emission rates for NO<sub>x</sub>, CO and VOC were included in this permit.

## PLANT SITE EMISSION LIMIT

### Particulate

12. The increase in fugitive emissions is due to an increase in the amount of limestone received, handled, & processed, and the input of emissions from paved/unpaved roads. The decrease in current non-fugitive emissions is due to the elimination Kiln No. 2 Cooler and Bypass Stacks, and the lower emission factor for Kiln No. 1 and No. 2 based on November 1995 stack test results from Kiln No.2. Further reductions in non-fugitive emissions will occur when the project to eliminate emissions from Kiln No. 1 Cooler and Bypass Stacks is complete. The increase in non-fugitive emissions is from an overall increase in plant production and the addition of Roller Mill No. 4.

### Sulfur Dioxide

The increased sulfur dioxide emissions is due to the following changes: the use of higher sulfur fuel in the kilns. The sulfur in the waste fuel oil will increase from 0.5 to 1.0 percent. The annual emission factors for Kiln No. 1 and No. 2 are twice the amount of the November 1995 stack tested value. Since the stack test was conducted using 0.5 percent fuel, this is a reasonable emission factor to use.

The sulfur dioxide emission factor for Kiln No. 3 is limited to the PSD permit limit of 32 tons/year. The PSD permit limit did not take into account the amount of sulfur in the lime but did allow for the burning of fuel oil at 1.55 percent sulfur fuel for 7560 hours a year (letter from Donald P. Dubois, EPA to Mr. William Kistler, Ash Grove Cement). The annual emission factor of 0.63 lb/ton for Kiln No 3 is equivalent to the highest one hour November 1995 stack test result using 0.5 percent sulfur fuel. The actual SO<sub>2</sub> stack test data for Kiln No.3 was questionable due to the decreasing SO<sub>2</sub> emission for each run.

In response to these concerns, Ash Grove submitted additional mass balance information based on an "in-house" stack test conducted to determine a separate sulfur mass balance in June 1995 prior to the required DEQ emissions test. The stack test was conducted using low sulfur natural gas and 0.01 percent sulfur off specification fuel oil. The conclusions drawn from this analysis is that the annual emission factor of 0.89 lb/ton is being used with a margin of safety such that the 32.9 ton/year emission limit will not be exceeded. To verify these assumptions and to ensure the integrity of the PSD SO<sub>2</sub> emission limit, an emissions test for SO<sub>2</sub> is required for Kiln No. 3 to show compliance with this emission factor while burning 1.0 percent sulfur waste oil. (see Condition No. 17).

The Roller Mill/Dryers were stack tested for SO<sub>2</sub> in November 1995 while burning natural gas. The annual emission factor of 0.0042 lb/ton requested in the permit is reflective of this stack test result. The burner on the Roller Mill/Dryer No 4 is equipped to fire natural gas and landfill gas, however Roller Mill/Dryer No. 4 currently uses natural gas.

#### Nitrogen Oxides

The increase in the PSEL for nitrogen oxides is due to the addition of Roller Mill/Dryer No. 4 and emission factors which reflect the results of the November 1995 stack test on natural gas.

#### Carbon Monoxide

The PSEL for carbon monoxide has remained the same. The emission factors for the roller/miller dryer reflect the results of the November 1995 stack tests on natural gas.

13. The normal operating schedule for the quicklime, hydrate, and agricultural lime processes are different from the baseline year because the addition of equipment decreased the overall production time of existing equipment.
14. The normal operating schedule for each process is listed in the plant site emission detail sheet.
15. The potential annual and maximum hourly plant production and fuel burned has increased since baseline year.

The annual plant production is as follows:

Raw Material (Tons)	Product (Tons)
796,100 Limestone	138,300 Quicklime
36,000 Dolomitic Limestone	26,200 Hydrated Lime
7,100 Water	480,000 Agricultural Lime
	129,700 Carbon Dioxide from calcined limestone



The potential annual and hourly amount of fuel burned is as follows:

Annual Fuel Use	Natural Gas (cf/yr)	On-Spec Waste Oil (gal/yr)	Off-Spec. Waste Oil (gal/yr)	Landfill Gas (cf/yr)
Roller	183 million	None	None	None
Mill/Dryers				
Kilns	900 million	Assume all Off-Spec	6.4 million	1,900 million
<b>TOTAL</b>	<b>1,083 million</b>		<b>6.4 million</b>	<b>1,900 million</b>

Hourly Fuel Use	Natural Gas (cf/hr)	On-Spec Waste Oil (gal/hr)	Off-Spec. Waste Oil (gal/hr)	Landfill Gas (cf/hr)
Roller				
Mill/Dryers	34,000	None	None	None
Kilns	110,000	Assume all Off-Spec	730	230,000
<b>TOTAL</b>	<b>144,000</b>		<b>730</b>	<b>230,000</b>

#### SIGNIFICANT EMISSION RATE

16. The Plant Site Emission Limit increase over baseline is less than the Significant Emission Rate (SER) as defined in OAR 340-28-110(110) for all pollutants and is shown below. No further air quality analysis is required for those pollutants. An analysis for compliance with the Highest and Best Practicable Treatment and Control requirement for new equipment included the use of the fabric filter on Roller Mill/Dryer No. 4.

Pollutant	Baseline (tons/yr)	Proposed PSEL (tons/yr)	Increase (tons/yr)	SER (tons/yr)
Particulate	95.18	90.0	-5.18	25
PM <sub>10</sub>	51.57	52.25 <sup>a</sup>	0.68	15
SO <sub>x</sub>	42.95	76.0	33.05	40
NO <sub>x</sub>	35.9	50.0	14.1	40
CO	20.9	63.0	42.1	100
VOC	2.10	5.0	2.9	40

<sup>a</sup> PM<sub>10</sub> is not included as a PSEL.

17. The source is not located within 100 kilometers (62 miles) of a Class I air quality protection area; therefore no visibility analysis is required.

AIR TOXICS

18. A review of toxic air pollutant emissions indicates that potential emissions of the compounds listed below would exceed the major Hazardous Air Pollution (HAP) thresholds.

Pollutant	Maximum Amount (ppm)	Potential to Emit (PTE)	
		Off-Spec. Oil*	PTE**
		(gal/yr)	(ton/yr)
Lead (Pb)	100	6.4 million	2.5
Arsenic (As)	5	6.4 million	0.126
Cadmium (Cd)	2	6.4 million	0.05
Chromium (Cr)	10	6.4 million	0.252
Halogens as HCl	4000	6.4 million	101
Total Organic Carbon (TOC)***		6.4 million	2.8
TOTAL			107

\* Off-Specification Oil with 49 ppm PCB's

\*\* Mass balance Calculation Assumes no control {ppm/million x 7.88 lb/gal x gal/year}

\*\*\* Assumes 30% of VOC emissions are TOC {4.7/0.3 = 16 tons/year}; Assumes 82% of TOC emitted is non-HAP based on stack test conducted at Ash Grove Cement Plant in Seattle. {16 x (1-0.82) = 2.8 tons/year}. The calculation of Total Organic Carbon (TOC) accounts for HAPs from the by-products of combustion.

The purpose of the Synthetic Minor Permit is to limit the Potential to Emit, such that, the emissions are below 10 tons/year of Individual HAP and 25 tons/year of Total HAP. The Synthetic Minor Condition for halogens limits the Potential to Emit HCl to below 10 tons/year. Condition No. 18 limits the amount of arsenic in the waste oil. The limit keeps the proposed emission of arsenic below the de minimus level in Division 32. Division 32 was used as a guideline to compare the proposed HAP emissions to those HAP with a de minimus level in Table 1.

## Proposed Emissions with Synthetic Minor Limitations

Pollutant	Max. Amount	Off-Spec.	Control	Proposed**	340-032 Table 1
		Oil*			
	(ppm)	(gal/yr)	(%)	(ton/yr)	(ton/yr)
Lead (Pb)	100	6.4 million	98	0.05	0.6
Arsenic (As)	4.8	6.4 million	98	0.002	0.005
Cadmium (Cd)	2	6.4 million	98	0.001	0.01
Chromium (Cr)	10	6.4 million	98	0.005	0.006
Halogens as HCl	1575	6.4 million	90	4.0	10.0
Total Organic Carbon (TOC)***		6.4 million	---	2.8	
TOTAL				6.9	

\* Off-Specification Oil with 49 ppm PCB's

\*\* Mass balance Calculation Assumes 98% control  $\{(ppm/million \times 7.88 \text{ lb/gal} \times \text{gal/year}) \times (1-0.98)\}$ . 98% control efficiency is based on a literature search for HAP data. Literature references include "Incineration of Hazardous Waste: A Critical Review Update," Dempsey et.al., *Air and Waste Management Association Journal*, pp.25-74, January 1993 and "Proposed Technology Based Standard for Toxic Metal Emission from Hazardous Waste Thermal Treatment Systems," Gossman Consulting Inc., September 28, 1993. Control efficiencies in the articles refer to lime scrubber/fabric filter control technology at cement kilns.

\*\*\* Assumes 30% of VOC emissions are TOC  $\{4.7/0.3 = 16 \text{ tons/year}\}$ ; Assumes 82% of TOC emitted is non-HAP based on stack test conducted at Ash Grove Cement Plant in Seattle.  $\{16 \times (1-0.82) = 2.8 \text{ tons/year}\}$  The calculation of Total Organic Carbon (TOC) accounts for HAPs from the by-products of combustion.

#### ADDITIONAL REQUIREMENTS

19. Source testing is required on Kiln No. 3 and Roller Mill/Dryer No. 4. (Condition No. 17). Limits on the amount of arsenic, lead, cadmium, chromium, halogens, and PCB's in the used oil (Condition No. 18 - 22) is determined by composite samples of the used oil.
20. The source is required to submit reports to the Department semi-annually.
21. The source is subject to immediate (within one hour) reporting of excess emissions.
22. Special conditions contained in the permit include limits on the amount of lead, arsenic, cadmium, chromium, halogens, and PCB's in the used oil fired, use of fuel oil that does not contain more than 1.0% sulfur fuel, and burning only natural gas in the Roller Mill/Dryers.
23. This source is not subject to federal regulations for New Source Performance Standards (NSPS). Subpart HH, 'Standards of Performance for Lime Manufacture' applies to rotary lime kilns. A rotary lime kiln is defined as an inclined rotating drum. The kilns at Ash Grove are calcimatic kilns. A calcimatic kiln is described as a revolving donut shaped hearth. Subpart OOO, 'Standards of Performance for Nonmetallic Mineral Processing Plants' does not apply to Roller Mill/Dryer No. 4 because this agricultural mill was manufactured in 1954. The three existing agricultural mills for grinding of agricultural limestone were manufactured in 1947.
24. This source is not subject to federal regulations for New Source Review.
25. This source is not subject to federal regulations for Prevention of Significant Deterioration (PSD). A stack test is required on Kiln No.3 while burning fuel with 1 percent sulfur to determine compliance with the existing EPA PSD limit of 32.9 tons/yr and 8.7 lbs/hr.
26. This source is not subject to federal regulations for National Emissions Standards for Hazardous Air Pollutants (NESHAP).

**PUBLIC NOTICE** The proposed Plant Site Emission Limit is greater than the previous permit and is shown below. The increase represents an actual emissions increase from the previous permit, and the proposed permit was placed on public notice from July 14 to August 12, 1997

Pollutant	Previous PSEL	Proposed PSEL	Revised Emission Factors	Actual Increase
Fugitive Particulate	13.4	26.0	+ 6.04	6.56
Non-Fugitive Particulate	81.6	64.0	- 18.49	0.89
SOX	33.1	76.0	+ 23.5	19.4
NOx	39.5	50.0	- 2.7	13.2
CO	77.0	63.0	- 30.8	16.8
VOC	3.3	5.0	+ 0.2	1.5

27. A public hearing was held at Northwest Region 2020 SW Fourth Ave., Suite 400, Portland OR 97201 on August 11th to receive oral comments on the proposed permit. Written comments were accepted until August 12th. There was no formal testimony or written comments from the public.

BAM/AOB  
 August 28, 1997



# Oregon

Theodore R. Kulongoski, Governor

## Department of Environmental Quality

Northwest Region Portland Office

2020 SW 4<sup>th</sup> Avenue, Suite 400

Portland, OR 97201-4987

(503) 229-5263

FAX (503) 229-6945

TTY (503) 229-5471

JUN 16 2006

EPA REGION X  
RINDY RAMOS  
MAIL STOP OAQ-107  
1200 SIXTH AVENUE  
SEATTLE, WASHINGTON 98101

RE: ISSUED NEW SIMPLE AIR CONTAMINANT DISCHARGE  
PERMIT:  
ASH GROVE CEMENT COMPANY  
PERMIT # 26-0146

Ms Ramos,

Enclosed please find the issued new Air Contaminant Discharge Permit :

ASH GROVE CEMENT COMPANY  
PERMIT # 26-0146

If you have questions relating to the issuance of this permit, please contact me at (503) 229-5582.

Sincerely,

Catherine Blaine  
Air Quality Permit Coordinator  
Northwest Region

Enclosure

Received  
JUN 21 2006  
Office Of Air, Waste  
And Toxics

USEPA REC



0000415

## SIMPLE AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality  
Northwest Region  
2020 SW 4th Avenue, #400  
Portland, Oregon 97201  
(503) 229-5554

This permit is being issued in accordance with the provisions of ORS 468A.040 and  
based on the land use compatibility findings included in the permit record.

---

**ISSUED TO:**

Ash Grove Cement Company  
3737 N. Port Center Way  
Portland, OR 97227

**INFORMATION RELIED UPON:**

Application No.: 021705  
Date Received: 01/06/06

Additional information  
received through 05/03/06

**PLANT SITE LOCATION:**

4098 N. Port Center Way  
Portland, OR 97227

**LAND USE COMPATIBILITY FINDING:**

Approving Authority: City of Portland  
Approval Date: 1/19/06

**ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY**



JUN 16 2006

Ed Druback, Northwest Region Air Quality Manager

Dated

Source(s) Permitted to Discharge Air Contaminants (OAR 340-216-0020):

Table 1 Code	Source Description	SIC
Part B, 75	Source not otherwise listed that would emit 10 tons or more per year of a pollutant if uncontrolled	n/a
	Cement distribution	5032

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## **1.0 GENERAL EMISSION STANDARDS AND LIMITS**

- 1.1. Visible Emissions** The permittee must ensure that emissions from any air contaminant do not equal or exceed 20% opacity for a period aggregating more than 30 seconds in any one hour.
- 1.2. Particulate Matter Emissions** The permittee must ensure that particulate matter emissions from any air contaminant source other than fugitive emission sources do not exceed 0.1 grains per standard cubic foot.
- 1.3. Fugitive Emissions** The permittee must take reasonable precautions to prevent fugitive dust emissions by:
- a. Treating vehicular traffic areas of the plant site under the control of the permittee.
  - b. Operating all air contaminant-generating processes so that fugitive type dust associated with the operation will be adequately controlled at all times.
  - c. Storing collected materials from air pollution control equipment in a covered container or other method equally effective in preventing the material from becoming airborne during storage and transfer.
- 1.4. Particulate Matter Fallout** The permittee must not cause or permit the emission of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. The Department will verify that the deposition exists and will notify the permittee that the deposition must be controlled.
- 1.5. Nuisance and Odors** The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by Department personnel.

## **2.0 OPERATION AND MAINTENANCE REQUIREMENTS**

- 2.1. Baghouse Efficiency** Each baghouse must achieve a minimum particulate removal efficiency of 99.99%.
- 2.2. Replacement Filter Bags** When replacing fabric filter bags in any baghouse, the permittee may not substitute a bag with a lower control efficiency specification than 99.99%.



### 3.0 PLANT SITE EMISSION LIMITS

**3.1. Plant Site  
Emission Limits  
(PSEL)**

Plant site emissions must not exceed the following:

Pollutant	Limit	Units
PM <sub>10</sub>	14	tons per year

**3.2. Emission Limit  
Period**

The plant site emissions limits apply to any 12-consecutive calendar month period.

### 4.0 COMPLIANCE DEMONSTRATION

**4.1. PSEL Compliance  
Monitoring**

Compliance with the PSEL is determined for each 12-consecutive calendar month period based on the following calculation for each pollutant:

$$E = \Sigma(EF \times P)/2000 \text{ lbs}$$

where,

$$\begin{aligned} E &= \text{pollutant emissions (ton/yr);} \\ EF &= \text{pollutant emission factor (see Condition 10.0);} \\ P &= \text{process production (see Condition 11.0)} \end{aligned}$$

**4.2. Emission Factors**

The permittee must use the default emission factors provided in Condition 10.0 for calculating pollutant emissions, unless alternative emission factors are approved by the Department. The permittee may request or the Department may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by the Department.

### 5.0 RECORDKEEPING REQUIREMENTS

**5.1. Operation and  
Maintenance**

The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices:

- a. Monthly material throughput, in tons, as listed in the table below.

Process	Baghouse(s)
Ship unloading	614.BF 1
Conveyor to tanks	614.BF2
North terminal storage tanks	614.BF 3-5
Railcar loading	611.BF1
Railcar loading reclaim	611.BF2
Truck load-out pipe conveyor	611.BF3
Railcar load-out	621.BF1
South terminal storage silos	621.BF2
Truck load-out	621.BF3

- b. Major maintenance on the baghouses, i.e., more than one-third of bags replaced, on occurrence.
- c. Perform monthly calculation of 12-month emission rate in accordance with the formula in Condition 4.1.

**5.2. Excess Emissions** The permittee must maintain records of excess emissions as defined in OAR 340-214-0300 through 340-214-0340 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns, or scheduled maintenance. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must cease operation of the equipment or facility no later than 48 hours after the beginning of the excess emissions, unless continued operation is approved by the Department in accordance with OAR 340-214-0330(4).

**5.3. Complaint Log** The permittee must maintain a log of all written complaints and complaints received via telephone that specifically refer to air pollution concerns associated to the permitted facility. The log must include a record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.

**5.4. Retention of Records** Unless otherwise specified, all records must be maintained on site for a period of two (2) years and made available to the Department upon request.

## **6.0 REPORTING REQUIREMENTS**

**6.1. Excess Emissions** The permittee must notify the Department of excess emissions events if the excess emission is of a nature that could endanger public health.

- a. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the

problem. Notice must be made to the regional office identified in Condition 7.4..

- b. If the excess emissions occur during non-business hours, the permittee must notify the Department by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.
- c. The permittee must also submit follow-up reports when required by the Department.

## 6.2. Annual Report

For each year this permit is in effect, the permittee must submit to the Department by **February 15** two (2) copies of the following information for the previous calendar year:

- a. Material throughput, in tons, as listed in the table below:

Process	Baghouse(s)
Ship unloading	614.BF 1, 2
Storage tanks	614.BF 3-5
South terminal silos	621.BF 2,3
Truck load-out	621.BF2,3
Railcar reclaim/loading	611.BF1,2
Railcar load-out	611.BF3 & 621.BF1

- b. A summary of 12-month pollutant emissions determined each month in accordance with Condition 4.0.
- c. Records of all planned and unplanned excess emissions events.
- d. Summary of complaints relating to air quality received by permittee during the year.
- e. List permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions.
- f. List major maintenance performed on pollution control equipment.

## 6.3. Initial Startup Notice

The permittee must notify the Department in writing of the date a new facility is started up. The notification must be submitted no later than seven (7) days after startup.

## 6.4. Notice of Change of Ownership or Company Name

The permittee must notify the Department in writing using a Departmental "Permit Application Form" within 60 days after the following:

- a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or
  - b. Sale or exchange of the activity or facility.
- 6.5. Construction or Modification Notices**

The permittee must notify the Department in writing using a Departmental "Notice of Construction Form," or "Permit Application Form," and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:

  - a. Constructing, installing, or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;
  - b. Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or
  - c. Constructing or modifying any air pollution control equipment.
- 6.6. Where to Send Reports and Notices**

The reports, with the permit number prominently displayed, must be sent to the Permit Coordinator for the region where the source is located as identified in Condition 7.3.

## **7.0 ADMINISTRATIVE REQUIREMENTS**

- 7.1. Permit Renewal Application**

The completed application package for renewal of this permit is due on **04/01/11**. Two (2) copies of the application must be submitted to the DEQ Permit Coordinator listed in condition 7.3
- 7.2. Permit Modifications**

Application for a modification of this permit must be submitted not less than **60** days prior to the source modification. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the Business Office of the Department.
- 7.3. Permit Coordinator Addresses**

All reports, notices, and applications should be directed to the Permit Coordinator for DEQ's Northwest Region:

Department of Environmental Quality  
Northwest Region  
2020 SW 4th Avenue, Suite 400  
Portland, OR 97201-4987  
Telephone: (503) 229-5582

- 7.4. **Department Contacts** Information about air quality permits and the Department's regulations may be obtained from the DEQ web page at [www.deq.state.or.us](http://www.deq.state.or.us). All inquiries about this permit should be directed to the regional office for the area where the source is located:

Department of Environmental Quality  
Gresham Office  
1550 NW Eastman Parkway, Suite 290  
Gresham, OR 97030  
Telephone: (503) 667-8414

## 8.0 FEES

- 8.1. **Annual Compliance Fee** The Annual Fee specified in OAR 340-216-0020, Table 2, Part 2 for a Simple ACDP is due on **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by Department regulations, will be mailed prior to the above date.
- 
- 8.2. **Change of Ownership or Company Name Fee** The non-technical permit modification fee specified in OAR 340-216-0020, Table 2, Part 3(a) is due with an application for changing the ownership or the name of the company.
- 8.3. **Special Activity Fees** The special activity fees specified in OAR 340-216-0020, Table 2, Part 3 (b through i) are due with an application to modify the permit.
- 8.4. **Where to Submit Fees** Fees must be submitted to:  
Department of Environmental Quality  
Business Office  
811 SW Sixth Avenue  
Portland, Oregon 97204-1390

## 9.0 GENERAL CONDITIONS AND DISCLAIMERS

- 9.1. **Permitted Activities** This permit allows the permittee to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, or is revoked.

- 9.2. Other Regulations** In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by the Department.
- 9.3. Conflicting Conditions** In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.
- 9.4. Masking of Emissions** The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement.
- 9.5. Department Access** The permittee must allow the Department's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095.
- 9.6. Permit Availability** The permittee must have a copy of the permit available at the facility at all times.
- 9.7. Open Burning** The permittee may not conduct any open burning except as allowed by OAR 340 Division 264.
- 9.8. Asbestos** The permittee must comply with the asbestos abatement requirements in OAR 340, Division 248 for all activities involving asbestos-containing materials, including, but not limit to, demolition, renovation, repair, construction, and maintenance.
- 9.9. Property Rights** The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
- 9.10. Termination, Revocation, or Modification** The Department may modify or revoke this permit pursuant to OAR 340-216-0082 and 340-216-0084.

## 10.0 EMISSION FACTORS – PM<sub>10</sub>

Emissions device or activity	Control Unit	Emission Factor (EF)	EF units	EF reference
Ship unloading	614.BF1	0.00713	Lb/ton	AP-42
Conveyor to storage tanks	614.BF2	0.00397	Lb/ton	AP-42
North terminal storage tanks	614.BF3-5	0.00052	Lb/ton	AP-42
Railcar loading	611.BF1	0.00171	Lb/ton	AP-42
Rail loading reclaim	611.BF2	0.00469	Lb/ton	AP-42
Truck load-out pipe conveyor	611.BF3	0.00192	Lb/ton	AP-42
Railcar & truck load-out	621.BF1	0.00077	Lb/ton	AP-42
South terminal storage silos	621.BF2	0.00146	Lb/ton	AP-42
Truck loading	621.BF3	0.00230	Lb/ton	AP-42

## 11.0 PROCESS/PRODUCTION RECORDS

Emissions device or activity	Process or production parameter	Frequency
Ship unloading	Tons of material unloaded	Monthly
North terminal storage tanks (1-3)	Tons of material transferred	Monthly
South terminal storage silos	Tons of material transferred	Monthly
Rail load-out	Tons of material shipped	Monthly
Truck load-out	Tons of material shipped	Monthly

## 12.0 ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit	NSR	New Source Review
ASTM	American Society for Testing and Materials	O <sub>2</sub>	oxygen
AQMA	Air Quality Maintenance Area	OAR	Oregon Administrative Rules
calendar year	The 12-month period beginning January 1st and ending December 31st	ORS	Oregon Revised Statutes
CFR	Code of Federal Regulations	O&M	operation and maintenance
CO	carbon monoxide	Pb	lead
DEQ	Oregon Department of Environmental Quality	PCD	pollution control device
dscf	dry standard cubic foot	PM	particulate matter
EPA	US Environmental Protection Agency	PM <sub>10</sub>	particulate matter less than 10 microns in size
FCAA	Federal Clean Air Act	ppm	part per million
gal	gallon(s)	PSD	Prevention of Significant Deterioration
gr/dscf	grains per dry standard cubic foot	PSEL	Plant Site Emission Limit
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040	PTE	Potential to Emit
I&M	inspection and maintenance	RACT	Reasonably Available Control Technology
lb	pound(s)	scf	standard cubic foot
MMBtu	million British thermal units	SER	Significant Emission Rate
NA	not applicable	SIC	Standard Industrial Code
NESHAP	National Emissions Standards for Hazardous Air Pollutants	SIP	State Implementation Plan
NO <sub>x</sub>	nitrogen oxides	SO <sub>2</sub>	sulfur dioxide
NSPS	New Source Performance Standard	Special Control Area	as defined in OAR 340-204-0070
		VE	visible emissions
		VOC	volatile organic compound
		year	A period consisting of any 12-consecutive calendar months



Department of Environmental Quality  
Northwest Region  
Air Quality Program

**Simple**  
**AIR CONTAMINANT DISCHARGE PERMIT**  
**REVIEW REPORT**

Ash Grove Cement Company  
3737 N. Port Center Way  
Portland, OR 97227  
(503) 285-4621

Unassigned emissions	
Emission credits	
Source test	
COMS	
CEMS	
Compliance schedule	
Special conditions	
Annual report	X
Semi-annual report	
Quarterly report	

Monthly report	
Excess emissions report	
NSPS	
NESHAP	
NSR	
PSD	
RACT	
FCE	
Public Notice	II

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## **PERMITTING**

### PERMITTING ACTION

1. The proposed permit is a new permit for an existing source. Ash Grove Cement operates a small material transfer facility in Portland. The company has recently purchased a similar facility located on adjacent land from Columbia Aluminum Corp of Goldendale, WA. That facility had permit 26-3069 until it was cancelled in 1994 due to a low level of emissions. This portion of the new combined facility is referred to as the Goldendale side. Combined emissions of particulate matter from the expanded Ash Grove facility will exceed the threshold level of 10 tons per year.

### OTHER PERMITS

2. Other permits issued or required by the Department of Environmental Quality for this source include a general storm water permit for the former Goldendale facility. The Ash Grove portion is a designated Water Pollution Control Facility for discharge of process water.

### ATTAINMENT STATUS

3. The source is located in a maintenance area for CO and Ozone. NO<sub>x</sub> and VOC are precursors to Ozone. The facility is an insignificant source of CO, NO<sub>x</sub> and VOC. The area is in attainment for all other criteria pollutants, including PM and PM<sub>10</sub>. The subject facility is a source of PM<sub>10</sub> only.
4. The source is not located within 10 kilometers of the Mt Hood Wilderness Area and the emissions are less than the significant emissions rate.

## **SOURCE DESCRIPTION**

### OVERVIEW

5. The permittee operates a cement and alumina transfer facility. Material is unloaded from ships and railcars, transferred to storage silos, then loaded out to trucks and railcars. The former Goldendale side was built in 1982 and includes ship unloading, and conveyors to the storage elevator and silos; and a railcar load-out point. The Ash Grove side was built in 1995 and includes a railcar and truck unload facility, storage elevator, and truck load-out point. The two sides will be connected by a fully enclosed conveyor.

## PROCESS AND CONTROL DEVICES

6. Air contaminant sources at the facility will consist of the following:

Baghouse	Activity
614.BF1	Ship unloading
614.BF2	Conveyor to North storage tanks
614.BF3-5	North storage tanks
611.BF1	Rail car unloading
611.BF2	Rail unloading reclamation
611.BF3	Truck load-out pipe conveyor
621.BF1	Rail car load-out
621.BF2	South terminal storage silos
621.BF3	Truck load

## **COMPLIANCE**

7. The facility will be inspected by Department personnel to ensure compliance with the permit conditions.

## **EMISSIONS**

8. Proposed PSEL information:

Pollutant	Baseline Emission Rate (tons/yr)	Netting Basis		Plant Site Emission Limits (PSEL)		
		Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL (tons/yr)	Proposed PSEL (tons/yr)	PSEL Increase (tons/yr)
PM <sub>10</sub>	n/a	n/a	n/a	n/a	14	14

- The proposed PSEL is equal to the Generic PSEL in accordance with OAR 340-216-0064(4)(b) and the netting basis is zero in accordance with OAR 340-222-0040(2).
- All activities are controlled by baghouses. Therefore, all PM emissions are considered to be PM<sub>10</sub>.
- Estimated actual emissions are 12 tons per year, based on the processing of 1,050,000 tons of material during 8,760 hours of operation per year. Emission factors were derived from the anticipated efficiencies of the baghouses, equivalent to 0.01 gr/dscf.
- The PSEL is a federally enforceable limit on the potential to emit.

### SIGNIFICANT EMISSION RATE ANALYSIS

9. The proposed Plant Site Emission Limit is less than the Netting Basis plus the significant emission rate, thus no further air quality analysis is required.
10. The facility will not be allowed any increase in the PSEL without first undergoing New Source Review.

## **MAJOR SOURCE APPLICABILITY**

### CRITERIA POLLUTANTS

11. A major source is a facility that has the potential to emit more than 100 tons per year of any criteria pollutant. This facility is not a major source of criteria pollutant emissions. The conveyance systems that comprise this bulk terminal are controlled by baghouses. Plant operations cease when the control system is not functioning. The estimated actual emissions shown above represent potential to emit.

### HAZARDOUS AIR POLLUTANTS

12. A major source is a facility that has the potential to emit more than 10 tons/year of any single HAP or 25 tons/year of combined HAPs. This facility is not a source of hazardous air pollutants.

## **ADDITIONAL REQUIREMENTS**

### NSPS APPLICABILITY

13. There are no sources at this facility for which NSPS standards have been promulgated.

### NESHAPS/MACT APPLICABILITY

14. There are no sources at this facility for which NESHAPS/MACT standards have been promulgated.

### RACT APPLICABILITY

15. The facility is located in the Portland AQMA, but it is not one of the listed source categories in OAR 340-232-0010, thus the RACT rules do not apply.

### TACT APPLICABILITY

16. The source is meeting the state's TACT/Highest and Best Rules by controlling emissions through the use of baghouses at all critical points and a fully enclosed conveyor between the two parts of the plant area.

### **PUBLIC NOTICE**

17. Pursuant to OAR 340-216-0064(5)(a), issuance of Simple Air Contaminant Discharge Permits require public notice in accordance with OAR 340-209-0030(3)(b), which requires that the Department provide notice of the proposed permit action and a minimum of 30 days for interested persons to submit written comments. **The draft permit was made available for public comment from May 12, 2006 until 5pm, June 12, 2006. No comments were received from the public.**

ka:gg  
6/16/2006

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**STANDARD**

**AIR CONTAMINANT DISCHARGE PERMIT**

ENF/COMPL  
TV ACTIVITY  
MACT  
OTHER

Department of Environmental Quality  
Northwest Region  
2020 SW 4th Avenue, #400  
Portland, Oregon 97201  
(503) 229-5554

This permit is being issued in accordance with the provisions of ORS 468A.040 and based on the land use compatibility findings included in the permit record.

ISSUED TO:

Ash Grove Cement Company  
13939 N. Rivergate Blvd.  
Portland, OR 97203

INFORMATION RELIED UPON:

Application No.: 020605  
Date Received: 04/30/03

PLANT SITE LOCATION:

13939 N. Rivergate Blvd.  
Portland, OR 97203

LAND USE COMPATIBILITY FINDING:

Approving Authority: City of Portland  
Approval Date: 01/07/1997

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

  
Ed Druback, Northwest Region Air Quality Manager

FEB 17 2004  
Dated

Source(s) Permitted to Discharge Air Contaminants (OAR 340-216-0020):

Table 1 Code	Source Description	SIC
Part B, 40	Lime manufacturing	3274

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## **1.0 GENERAL EMISSION STANDARDS AND LIMITS**

- 1.1. Visible Emissions** The permittee must comply with the following visible emission limits, as applicable:
- a. Emissions from any air contaminant source installed on or before June 1, 1970 must not equal or exceed 40% opacity for a period aggregating more than 3 minutes in any one hour.
  - b. Emissions from any air contaminant source installed, constructed, or modified after June 1, 1970 must not equal or exceed 20% opacity for a period aggregating more than 3 minutes in any one hour.
  - c. Emissions from any air contaminant source other than fuel burning equipment must not equal or exceed 20% opacity for a period aggregating more than 30 seconds in any one hour.
- 1.2. Particulate Matter Emissions** The permittee must comply with the following particulate matter emission limits, as applicable:
- a. Particulate matter emissions from any fuel burning equipment installed on or before June 1, 1970 must not exceed 0.2 grains per standard cubic foot, corrected to 12% CO<sub>2</sub> or 50% excess air.
  - b. Particulate matter emissions from any fuel burning equipment installed, constructed, or modified after June 1, 1970 must not exceed 0.1 grains per standard cubic foot, corrected to 12% CO<sub>2</sub> or 50% excess air.
  - c. Particulate matter emissions from fuel burning equipment must not exceed:
    - i. The emission rate shown in Figure 1 of OAR 340-208-0610 as a function of the maximum heat input when using oil or landfill gas.
  - d. Particulate matter emissions from any air contaminant source installed on or before June 1, 1970 other than fuel burning equipment and fugitive emission sources must not exceed 0.2 grains per standard cubic foot.
  - e. Particulate matter emissions from any air contaminant source installed, constructed, or modified after June 1, 1970 other than fuel burning equipment and fugitive emission sources must not exceed 0.1 grains per standard cubic foot.



- f. Non-fugitive particulate matter emissions from any process must not exceed the amount shown in Table 1 of OAR 340-226-0310 for the process weight allocated to such a process.

**1.3. Fugitive Emissions**

The permittee must take reasonable precautions to prevent fugitive dust emissions by:

- a. Treating vehicular traffic areas of the plant site under the control of the permittee.
- b. Operating all air contaminant-generating processes so that fugitive type dust associated with the operation will be adequately controlled at all times.
- c. Storing collected materials from air pollution control equipment in a covered container or other method equally effective in preventing the material from becoming airborne during storage and transfer.

**1.4. Particulate Matter Fallout**

The permittee must not cause or permit the emission of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. The Department will verify that the deposition exists and will notify the permittee that the deposition must be controlled.

**1.5. Nuisance and Odors**

The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by Department personnel.

**1.6. Fuels and Fuel Sulfur Content**

The permittee must not use any fuel other than natural gas, landfill gas, propane, butane, LPG, ASTM grade fuel oils, or used oil.

- a. Fuel oils must not contain more than:
  - i. 0.3% sulfur by weight for ASTM Grade 1 distillate oil;
  - ii. 0.5% sulfur by weight for ASTM Grade 2 distillate oil;
  - iii. 1.75% sulfur by weight for residual oil;
- b. The permittee must not use any fuel other than gaseous fuel (i.e., natural gas, landfill gas, propane, butane, or LPG) in the Roller Mill/Dryers.

## **2.0 SPECIFIC PERFORMANCE AND EMISSION STANDARDS**

- 2.1. Source Specific PM Emission Limitations
- The permittee must ensure that particulate matter emissions from process control baghouses do not exceed the following:
- Roller Mill/Dryers 1, 2, 3, 4 – 0.01 gr/dscf
  - Main baghouses, Kilns 1 and 2 – 0.01 gr/dscf
  - Main baghouse, Kiln 3 – 0.03 gr/dscf
  - All other baghouses – 0.02 gr/dscf

## **3.0 OPERATION AND MAINTENANCE REQUIREMENTS**

- 3.1. Work practices
- The permittee must monitor each baghouse for visible emissions at least monthly. If visible emissions are observed, the permittee must document the location, cause, and corrective action taken to eliminate the visible emissions.

## **4.0 PLANT SITE EMISSION LIMITS**

- 4.1. Plant Site Emission Limits (PSEL)
- Plant site emissions must not exceed the following:

Pollutant	Limit	Units
PM	98	tons per year
PM <sub>10</sub>	48	tons per year
SO <sub>2</sub>	73	tons per year
NO <sub>x</sub>	50	tons per year
CO	66	tons per year
VOC	7	tons per year
Single HAP	9	tons per year
Combined HAPs	24	tons per year

- 4.2. Annual Period
- The annual plant site emissions limits apply to any 12-consecutive calendar month period.

## **5.0 SOURCE TEST & COMPLIANCE DEMONSTRATION**

### **5.1. Testing Requirements**

During the permit term, the permittee must demonstrate the roller mill and kiln baghouses are capable of operating at their maximum operating capacity in compliance with Condition 2.1 by conducting a source test for particulate emissions on a representative roller mill baghouse. The permittee must also conduct a source test on Kiln 3 to demonstrate compliance with the PSD limits in Condition 6.1. The following test methods and procedures will be used:

- a. The process equipment must be operating at 90% or more of capacity during the source test.
- b. Oregon Method 5 must be used for particulate emissions.
- c. EPA Method 6c must be used for SO<sub>2</sub> emissions on Kiln 3.
  - i. The outlet of the main baghouse must be used as the sampling point for the test on Kiln 3.
  - ii. The fuel used during the test must be used oil, with a sulfur content at or below 1%, by weight.
  - iii. The test must consist of 3 one-hour test runs.
- d. The following process parameters must be monitored and recorded during the source test:
  - i. Visible emissions as measured by EPA Method 9 for a period of at least six minutes during or within 30 minutes before or after each test run on the roller mill and kiln baghouses; and
  - ii. Raw material feed rates;
  - iii. Amount and type of lime produced;
  - iv. Amount and type of fuel used;
  - v. Analysis of fuel and limestone for percent sulfur in Kiln 3;
  - vi. Operating temperatures; and
  - vii. A copy of the operator's log.
- e. The following operating parameters of control equipment must be monitored and recorded during the source test:

- i. Pressure drop across the baghouse;
- ii. Baghouse cleaning cycle; and
- iii. Number of compartments in operation.
- f. All tests must be conducted in accordance with the Department's Source Sampling Manual and the approved pretest plan. The pretest plan must be submitted at least 30 days in advance and approved by the Regional Source Test Coordinator. Test data and results must be submitted for review to the Regional Source Test Coordinator within 30 days unless otherwise approved in the pretest plan.
- g. Only regular operating staff may adjust the combustion system or production processes and emission control parameters during the source test and within two hours prior to the source test. Any operating adjustments made during the source test, which are a result of consultation with source testing personnel, equipment vendors or consultants, may render the source test invalid.
- h. The results of the test must be reported in pounds per hour and pounds per ton.

**5.2. PSEL Compliance Monitoring**

Compliance with the PSEL is determined for each 12-consecutive calendar month period based on the following calculation for each pollutant:

$$E = \Sigma(EF \times P)/2000 \text{ lbs}$$

where,

- E = pollutant emissions (ton/yr);
- EF = pollutant emission factor (see condition 12.0);
- P = process production parameter (see condition 13.0)

**5.3. Emission Factors**

The permittee must use the default emission factors provided in condition 12.0 for calculating pollutant emissions, unless alternative emission factors are approved by the Department. The permittee may request or the Department may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by the Department.

## **6.0 SPECIAL CONDITIONS**

- 6.1. PSD Limits                      The permittee must ensure that emissions from Kiln 3 do not exceed:
- a.        8.7 lb/hr and 32.9 ton/yr of SO<sub>2</sub>
  - b.        0.03 gr/dscf and 37.8 ton/yr of PM
- 6.2. Used oil Contents Limits      The permittee must ensure that the contents of used oil combusted on site does not exceed the following:
- a.        4.8 ppm of Arsenic (As)
  - b.        100 ppm of Lead (Pb)
  - c.        2 ppm of Cadmium (Cd)
  - d.        10 ppm of Chromium (Cr)
  - e.        49 ppm of Polychlorinated Biphenyls (PCB)
  - f.        1,575 ppm of halogens
- 6.3. Used oil Sulfur Content Limit      The permittee must ensure that used fuel oil burned on site does not exceed 1% sulfur, by weight.
- 6.4. Oil Analyses Requirements      The permittee must obtain analyses from the marketer or, if generated on site, have the used oil analyzed, so that it can be demonstrated that each shipment of used oil meets the limits set in Condition 6.2, above

## **7.0 RECORDKEEPING REQUIREMENTS**

- 7.1. Operation and Maintenance      The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices:
- a.        The permittee must monitor each baghouse for visible emissions at least monthly. If visible emissions are observed, the permittee must document the location, cause and corrective action taken to eliminate the visible emissions.
  - b.        Plant production of agricultural lime, quicklime, and hydrated lime (tons per year)

- c. The amount and type of fuel which is used to produce agricultural lime and quicklime (gallons per year, MMBtu per year)
- d. The amount of material received by barge and by rail (tons per year)

- 7.2. Excess Emissions** The permittee must maintain records of excess emissions as defined in OAR 340-214-0300 through 340-214-0340 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns, or scheduled maintenance. In many cases, excess emissions are evident when visible emissions are greater than 20% opacity for 3 minutes or more in any 60-minute period. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must cease operation of the equipment or facility no later than 48 hours after the beginning of the excess emissions, unless continued operation is approved by the Department in accordance with OAR 340-214-0330(4).
- 7.3. Complaint Log** The permittee must maintain a log of all written complaints and complaints received via telephone that specifically refer to air pollution concerns associated to the permitted facility. The log must include a record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.
- 7.4. Retention of Records** Unless otherwise specified, all records must be maintained on site for a period of two (2) years and made available to the Department upon request.

## **8.0 REPORTING REQUIREMENTS**

- 8.1. Excess Emissions** The permittee must notify the Department by telephone or in person of any excess emissions which are of a nature that could endanger public health.
- a. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the regional office identified in Condition 9.4.
  - b. If the excess emissions occur during non-business hours, the permittee must notify the Department by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.

- c. The permittee must also submit follow-up reports when required by the Department.

**8.2. Annual Report**

For each year this permit is in effect, the permittee must submit to the Department by **February 15** two (2) copies of the following information for the previous calendar year:

- a. Operating parameters:
  - i. Plant production of agricultural lime, quicklime, and hydrated lime (tons per year)
  - ii. The amount and type of fuel which is used to produce agricultural lime and quicklime (gallons per year, MMBtu per year)
  - iii. The amount of material received by barge and by rail (tons per year)
  - iv. The calculated PM, PM<sub>10</sub>, CO, NO<sub>x</sub>, VOC, SO<sub>2</sub>, individual HAP and aggregate HAP 12-month rolling emission rates for each month of the previous calendar year. Emissions must be calculated using the formula in Condition 5.2 and emission factors in Condition 12.0.
- b. Records of all planned and unplanned excess emissions events.
- c. Summary of complaints relating to air quality received by permittee during the year.
- d. List permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions.
- e. List major maintenance performed on pollution control equipment.

**8.3. Notice of Change of Ownership or Company Name**

The permittee must notify the Department in writing using a Departmental "Permit Application Form" within 60 days after the following:

- a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or
- b. Sale or exchange of the activity or facility.

**8.4. Construction or Modification Notices**

The permittee must notify the Department in writing using a Departmental "Notice of Construction Form," or "Permit Application Form," and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:

- a. Constructing, installing, or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;
- b. Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or
- c. Constructing or modifying any air pollution control equipment.

8.5. **Where to Send Reports and Notices** The reports, with the permit number prominently displayed, must be sent to the Permit Coordinator for the region where the source is located as identified in Condition 9.3.

## **9.0 ADMINISTRATIVE REQUIREMENTS**

9.1. **Permit Renewal Application** The completed application package for renewal of this permit is due on May 1, 2008. Two (2) copies of the application must be submitted to the DEQ Permit Coordinator listed in condition 9.3

9.2. **Permit Modifications** Application for a modification of this permit must be submitted not less than 60 days prior to the source modification. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the Business Office of the Department.

9.3. **Permit Coordinator Addresses** All reports, notices, and applications should be directed to the Permit Coordinator for the area where the source is located. The Permit Coordinator addresses are as follows:

Department of Environmental Quality  
Northwest Region  
2020 SW 4th Avenue, Suite 400  
Portland, OR 97201-4987  
Telephone: (503) 229-5

9.4. **Department Contacts** Information about air quality permits and the Department's regulations may be obtained from the DEQ web page at [www.deq.state.or.us](http://www.deq.state.or.us). All inquiries about this permit should be directed to the regional office for the area where the source is located. The Department's regional offices are as follows:



Department of Environmental Quality  
Portland Office  
2020 SW 4th Avenue, Suite 400  
Portland, OR 97201-4987  
Telephone: (503) 229-5554

## **10.0 FEES**

- |   |   |
|---|---|
| 10.1. Annual Compliance Fee                   | The Annual Fee specified in OAR 340-216-0020, Table 2, Part 2 for a Standard ACDP is due on <b>December 1</b> of each year this permit is in effect. An invoice indicating the amount, as determined by Department regulations, will be mailed prior to the above date. |
| 10.2. Change of Ownership or Company Name Fee | The non-technical permit modification fee specified in OAR 340-216-0020, Table 2, Part 3(a) is due with an application for changing the ownership or the name of the company.   |
| 10.3. Special Activity Fees                   | The special activity fees specified in OAR 340-216-0020, Table 2, Part 3 (b through i) are due with an application to modify the permit.  |
| 10.4. Where to Submit Fees                    | Fees must be submitted to:<br><div style="margin-left: 40px;">Department of Environmental Quality<br/>Business Office<br/>811 SW Sixth Avenue<br/>Portland, Oregon 97204-1390</div>   |

## **11.0 GENERAL CONDITIONS AND DISCLAIMERS**

- |                              |  |
|------------------------------|--|
| 11.1. Permitted Activities   | This permit allows the permittee to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, or is revoked. |
| 11.2. Other Regulations      | In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by the Department.   |
| 11.3. Conflicting Conditions | In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.   |
| 11.4. Masking of Emissions   | The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health,                                   |

safety, or welfare of any person or otherwise violate any other regulation or requirement.

- 11.5. Department Access** The permittee must allow the Department's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095.
- 11.6. Permit Availability** The permittee must have a copy of the permit available at the facility at all times.
- 11.7. Open Burning** The permittee may not conduct any open burning except as allowed by OAR 340 Division 264.
- 11.8. Asbestos** The permittee must comply with the asbestos abatement requirements in OAR 340, Division 248 for all activities involving asbestos-containing materials, including, but not limit to, demolition, renovation, repair, construction, and maintenance.
- 11.9. Property Rights** The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
- 11.10. Termination, Revocation, or Modification** The Department may modify or revoke this permit pursuant to OAR 340-216-0082 and 340-216-0084.

## 12.0 EMISSION FACTORS

Emissions device or activity	Pollutant	Emission Factor (EF)	EF units	EF Reference
Material handling/sizing	PM	0.064	Lbs/ton of material received by barge	AP-42
Material handling/sizing	PM	0.023	Lbs/ton of material received by rail	AP-42
Quicklime production	PM	0.322	Lbs/ton quicklime produced	AP-42, source test, vendor guarantee
Agricultural lime production	PM	0.081	Lbs/ton of agricultural lime	Vendor guarantee

Hydrated lime production	PM	0.56	Lbs/ton of hydrated lime	Source test
Material handling/sizing	PM <sub>10</sub>	0.024	Lbs/ton of material received by barge	AP-42
Material handling/sizing	PM <sub>10</sub>	0.009	Lbs/ton of material received by rail	AP-42
Quicklime production	PM <sub>10</sub>	0.177	Lbs/ton of quicklime produced	AP-42, source test, vendor guarantee
Agricultural lime production	PM <sub>10</sub>	0.045	Lbs/ton of agricultural lime	Vendor guarantee
Hydrated lime production	PM <sub>10</sub>	0.31	Lbs/ton of hydrated lime	AP-42, source test
Quicklime production	SO <sub>2</sub>	0.89	Lbs/ton of quicklime through kilns	Engineering est., source test
Agricultural lime production	SO <sub>2</sub>	0.0042	Lbs/ton of agricultural lime	Engineering est., source test
Quicklime production	NO <sub>x</sub>	0.48	Lbs/ton of quicklime processed through kilns 1 and 2	Source test
Quicklime production	NO <sub>x</sub>	0.63	Lbs/ton of quicklime processed through kiln 3	Source test
Agricultural lime production	NO <sub>x</sub>	0.017	Lbs/ton of agricultural lime	Source test
Quicklime production	CO	0.49	Lbs/ton of quicklime processed through kilns 1 and 2	Source test
Quicklime production	CO	0.94	Lbs/ton of quicklime processed through kiln 3	Engineering estimate
Agricultural lime production	CO	0.03	Lbs/ton of agricultural lime	Source test
Quicklime production	VOC	0.05	Lbs/ton of quicklime processed through kilns 1 and 2	Engineering estimate
Quicklime production	VOC	0.02	Lbs/ton of quicklime processed through kiln 3	Engineering estimate

Agricultural lime production	VOC	0.0132	Lbs/ton of agricultural lime	Engineering estimate
Used oil combustion	Individual HAP	1.24	Lb/1,000 gal	Engineering estimate
Used oil combustion	Aggregate HAP	1.71	Lb/1,000 gal	Engineering estimate

### 13.0 PROCESS/PRODUCTION RECORDS

Emissions device or activity	Process or production parameter	Frequency
Material handling/sizing	Amount of material received by barge (tons)	Monthly
Material handling/sizing	Amount of material received by rail (tons)	Monthly
Quicklime production	Amount of quicklime produced (tons)	Monthly
Quicklime production	Amount of quicklime through each of Kilns 1, 2 & 3 (tons)	Monthly
Agricultural lime production	Amount of agricultural lime produced (tons)	Monthly
Hydrated lime production	Amount of hydrated lime produced (tons)	Monthly
Natural gas usage	In million Btu's expended	Monthly
Landfill gas usage	In million Btu's expended	Monthly
Used oil	In 1,000 gallon units	Monthly

## 14.0 ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit	NSR	New Source Review
ASTM	American Society for Testing and Materials	O <sub>2</sub>	Oxygen
AQMA	Air Quality Maintenance Area	OAR	Oregon Administrative Rules
Calendar year	The 12-month period beginning January 1st and ending December 31 <sup>st</sup>	ORS	Oregon Revised Statutes
CFR	Code of Federal Regulations	O&M	operation and maintenance
CO	carbon monoxide	Pb	Lead
DEQ	Oregon Department of Environmental Quality	PCD	pollution control device
Dscf	dry standard cubic foot	PM	particulate matter
EPA	US Environmental Protection Agency	PM <sub>10</sub>	particulate matter less than 10 microns in size
FCAA	Federal Clean Air Act	ppm	part per million
Gal	gallon(s)	PSD	Prevention of Significant Deterioration
gr/dscf	grains per dry standard cubic foot	PSEL	Plant Site Emission Limit
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040	PTE	Potential to Emit
I&M	inspection and maintenance	RACT	Reasonably Available Control Technology
Lb	pound(s)	scf	standard cubic foot
MMBtu	million British thermal units	SER	Significant Emission Rate
NA	not applicable	SIC	Standard Industrial Code
NESHAP	National Emissions Standards for Hazardous Air Pollutants	SIP	State Implementation Plan
NO <sub>x</sub>	nitrogen oxides	SO <sub>2</sub>	sulfur dioxide
NSPS	New Source Performance Standard	Special Control Area	as defined in OAR 340-204-0070
		VE	visible emissions
		VOC	volatile organic compound
		year	A period consisting of any 12-consecutive calendar months

Department of Environmental Quality  
 Northwest Region  
 Air Quality Program

**Standard**  
**AIR CONTAMINANT DISCHARGE PERMIT**  
**REVIEW REPORT**

Ash Grove Cement Company  
 13939 N. Rivergate Blvd.  
 Portland, OR 97203  
 (503) 286-1677

Source Test	Compl Sched	Report				Excess		NSR	PSD	RACT	NSPS	NESHAP	Size	Public Notice
		A	S	Q	M	R	N							
x		x					x		x				Std	III

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## **PERMITTING**

### PERMITTING ACTION

1. The permit is a renewal for an existing Air Contaminant Discharge Permit (ACDP) which was issued on 09/02/97 and was originally scheduled to expire on 07/01/03. The old ACDP is being converted to a Standard ACDP in accordance with the rules adopted in May 2001. The company has a Standard permit to retain Baseline emission rates and PSD limitations.
2. Addendum 1, issued 08/28/00, allows the combustion of landfill gas in the roller mills/dryers.

### OTHER PERMITS

3. Other permits issued or required by the Department of Environmental Quality for this source include an NPDES for industrial waste water discharge. The facility is also a conditionally exempt generator of hazardous waste.

### ATTAINMENT STATUS

4. The source is located in an attainment area for PM, PM<sub>10</sub> and SO<sub>2</sub>, and a maintenance area for Ozone (precursors are NO<sub>x</sub> and VOC) and CO. This facility is an insignificant source of NO<sub>x</sub>, VOC, and CO, and a moderate source of PM, PM<sub>10</sub>, and SO<sub>2</sub>.

## **SOURCE DESCRIPTION**

### OVERVIEW

5. The permittee operates a lime manufacturing plant. The process includes raw material handling and sizing of limestone and dolomite; using calcimatic kilns to produce chemical lime; hydrating lime to produce calcium hydroxide; and using roller mills/dryers to produce agricultural lime. The facility was established in 1964.
6. The following changes have been made to the facility since the last permit renewal:
  - a. The facility no longer burns off-specification oil.
  - b. The bypass stacks on kilns 1 and 2 were removed in December 1995. The kiln exhaust now moves through the rock supply and a baghouse. This helps to preheat the raw material and has resulted in lower PM emissions.
  - c. A fourth roller mill was added in January 1997, allowing an increase in production.
  - d. In August 2000, the facility began burning landfill gas in the milling department.
  - e. A new baghouse was installed on the loading spouts in October 2000.

- f. In January 2001, the 4-ton/hr hydrating lime process equipment was replaced with equipment that can process 12 tons/hr. The change included replacement of the old wet scrubber with a pulse jet baghouse.
- g. Each milling department load spout was equipped with a new dust collector, which discharges the collected material directly into the trailer being loaded. This change occurred in April 2002.
- h. The storage department baghouse was replaced in October 2002, including new ducting from each piece of equipment in the department.
- i. In January 2003, a new 500-ton storage silo for quicklime, with baghouse, was added.

#### PROCESS AND CONTROL DEVICES

7. Main air contaminant sources at the facility are:

Process	Capacity	Control Device	Installed
Calcimatic Kilns 1, 2	5.4 tons/hr	WP reverse air baghouse	1963
Calcimatic Kiln 3	9.7 tons/hr	Fuller plenum pulse baghouse	1979
Hydrator (upgraded)	12 tons/hr	Cimprogetti pulse jet baghouse	2001
Roller Mill/Dryer, 1-3	31 tons/hr	Micropul pulse jet baghouse	1986
Roller Mill/Dryer 4	45 tons/hr	Micropul pulse jet baghouse	1997
Fugitives from raw material handling, roads, and stockpiles			

A complete list of emission points and controls is contained in the application.

#### **COMPLIANCE**

- 8. The facility was inspected in 1997, 1998, and in 1999 and found to be in compliance with permit conditions. The 2000 inspection found the facility to be out of compliance. The company had failed to report an episode of excess emissions. The facility was inspected in 2002 and found to be in compliance with permit conditions.
- 9. At the end of 2002, DEQ received two complaints regarding deposition of lime dust on cars and track-out from Ash Grove's wheel washing station. These conditions were not verified during a site visit.
- 10. One Notice of Noncompliance was issued to the facility on 9/9/00 for failure to report excess emissions. The company had started Kiln 1 on off-spec. oil, with the result of black smoke coming from the stack. A recent change in the pneumatic control system added to the problem. Unable to correct the problem, the operator switched to natural gas. No further occurrences have been noted.



## SPECIAL CONDITIONS

11. The facility is subject to specific limits under PSD. Also, the permittee is required to routinely analyze used fuel combusted in the kilns for metals and PCBs.

## EMISSIONS

12. Proposed PSEL information:

Pollutant	Baseline Emission Rate (tons/yr)	Netting Basis		Plant Site Emission Limits (PSEL)		
		Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL (tons/yr)	Proposed PSEL (tons/yr)	PSEL Increase (tons/yr)
PM	95	95	95	90	98	8
PM <sub>10</sub>	52	52	52	52	66	14
SO <sub>2</sub>	43	43	43	76	82	6
NO <sub>x</sub>	36	36	36	50	75	25
CO	21	21	21	63	99	36
VOC	2	2	2	5	41	34
Single HAP	n/a	n/a	n/a	n/a	9	9
Combined HAP	n/a	n/a	n/a	n/a	24	24

- a. The Baseline Year was 1977. Emissions from Kiln 3 were added to the Baseline because EPA approved the construction in 1977.
  - b. The proposed PSELs for all pollutants are equal to the netting basis plus the Generic PSEL except for PM and CO, which would be over 100 tons.
  - c. The SO<sub>2</sub> PSEL includes a separate PSEL for Kiln #3, as a result of a PSD review. The limit on Kiln 3 is 37.8 tons SO<sub>2</sub>/year. See the section below.
  - d. NO<sub>x</sub>, CO, and VOC were added to the PSEL in 1995.
  - e. The PSEL are based on the use of 7.9 million gallons of used oil, 161,000 tons of quicklime through the kilns, 650,000 tons of ag lime through the mills/dryers, and 50,000 tons/year of hydrate lime produced.
  - f. The PSEL is a federally enforceable limit on the potential to emit.
13. In 1995, Ash Grove requested that the baseline year emissions be increased by 20.8 tons of PM<sub>10</sub>, to include fugitive emissions. The original baseline calculations did not include PM<sub>10</sub>.

### SIGNIFICANT EMISSION RATE ANALYSIS

14. The original ACDP was issued in 1974 and included the emissions from two lime kilns. In 1979, Ash Grove applied for and received a PSD permit from EPA to install Kiln #3 (PSD-X-77-04). A screening method was used by EPA and BACT was determined to be the use of a baghouse of at least 98% efficiency. Emission limits were set for PM and SO<sub>2</sub>, specifically:
  - a. SO<sub>2</sub> 8.7 lb/hr and 32.9 ton/yr
  - b. PM 0.01 gr/dscf and 12.6 ton/yr
15. After installation of Kiln 3, a source test was conducted in 1979. The results showed that the emission factors used for EPA's approval were low for PM. *On 9/23/80, EPA issued a modified permit with PM limits of 0.03 gr/dscf and 37.8 tons/yr.*
16. In 1995, the emission factor for SO<sub>2</sub> from Kilns 1 and 2 was adjusted to reflect the correct limit on sulfur content in the fuel to 1%. The emission factor was changed to 0.89 lb/ton quicklime (9.7 lb/hr) for each kiln. The fuel used at the time of the 1979 source test had a sulfur content of 0.5%, so the emission factor was doubled.
17. Another source test was conducted in November 1997 to determine compliance with the PSD limit on SO<sub>2</sub> and to measure HCl emissions. The sulfur content was 0.90%. Results showed an SO<sub>2</sub> emission rate of 0.52 lb per ton of quicklime (3.5 lb SO<sub>2</sub>/hr). This is lower than the allowable rate of 0.89 lb SO<sub>2</sub>/ ton of quicklime, and is equivalent to 15.3 tons SO<sub>2</sub> over a period of 8760 hours. HCl emissions were measured at 0.051 lb/ton of quicklime.
18. For each pollutant, the proposed Plant Site Emission Limit is less than the Netting Basis plus the significant emission rate, thus no further air quality analysis is required.

## **MAJOR SOURCE APPLICABILITY**

### CRITERIA POLLUTANTS

19. A major source is a facility that has the potential to emit more than 100 tons per year of any criteria pollutant. This facility would be a major source of PM and SO<sub>2</sub> if not for the Plant Site Emission Limits.

### HAZARDOUS AIR POLLUTANTS

20. A major source is a facility that has the potential to emit more than 10 tons/year of any single HAP or 25 tons/year of combined HAPs. Add-on controls prevent the facility from having the potential to emit hydrogen chloride at Title V trigger levels. HAP estimates are based on the use of 7.9 million gallons of used oil per year, with a maximum PCB content of 49 ppm.

Hazardous Air Pollutant	Max. Amount (ppm)	PTE Without controls (tons/yr)	PTE With controls (tons/yr)
Lead (Pb)	100	3.1	0.06
Arsenic (As)	5	0.1	0.003
Cadmium (Cd)	2	0.1	0.001
Chromium (Cr)	10	0.3	0.006
Halogens as Hydrogen Chloride (HCl)	1575	49.2	4.9
Total Organic Carbon (TOC)		2.8	1.8
Total		53.6	6.8

- a. The mass balance calculation used to determine PTE without controls on the process is  $\text{ppm/million} \times 7.88 \text{ lb/gal oil} \times \text{gal/yr}$ . It was assumed that 30% of TOC emissions are VOC  $\{4.7/0.3 = 16 \text{ tons/yr}\}$  and 82% TOC emitted is non-HAP based on a source test conducted at Ash Grove's Seattle plant  $\{16 \times (1 - 0.82) = 2.8 \text{ tons/yr}\}$ . TOC accounts for HAP from the by-products of combustion.
  - b. The column on the right provides the anticipated emissions at 98% control. The 98% control efficiency is based on a literature search. References are "Incineration of Hazardous Waste: A Critical Review Update," Dempsey et.al., *Air And Waste Management Association Journal*, pp. 25-74, Januray 1993 and "Proposed Technology Based Standard for Toxic Metal Emissions from Hazardous Waste Thermal Treatment Systems," Gossman Consulting Inc., September 28, 1993. Control efficiencies in the articles refer to lime scrubber/fabric filter control technology at cement kilns.
21. Although the source has the capacity to emit above the Title V major source threshold levels, the permittee has elected not to obtain an Oregon Title V Operating Permit by requesting a PSEL below the major source threshold levels. The PSEL is a federally enforceable limit on PTE.

## ADDITIONAL REQUIREMENTS

### NSPS APPLICABILITY

22. 40 CFR Part 60, Subpart HH is not applicable to the source because the standard applies to rotary lime kilns. A rotary lime kiln is defined as an inclined rotating drum. The kilns at Ash Grove are calcimatic kilns. A calcimatic kiln is described as a revolving donut shaped hearth.

23. 40 CFR Part 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants was adopted by Oregon for Title V sources only. This facility is not a major source, thus not subject to the NSPS.

#### NESHAPS/MACT APPLICABILITY

24. The proposed 40 CFR Part 63, Subpart AAAAA, applies to Lime Manufacturing Plants. The subpart is not applicable because the facility qualifies as an area source. Area sources are not subject to the rule.

The company performed an operations source test on Kiln 3 in July 2001. EPA Method 25A and ASTM Method D6735-01 were used. A paired train and analyte spike were used as part of the test. The proposed NESHAP includes these two ASTM method options as requirements to demonstrate 'area source' status.

#### RACT APPLICABILITY

25. The facility is located in the Portland AQMA, but it is not one of the listed source categories in OAR 340-232, thus the RACT rules do not apply

#### TACT APPLICABILITY

26. The source is meeting the states TACT/Highest and Best Rules by the use of baghouses on all process lines. The grain loading limits on the baghouses are more stringent than those allowed under the process weight rule (OAR 340-266-0300 - 0320).

### **SOURCE TESTING**

#### PRIOR TESTING RESULTS

27. The permittee is required to demonstrate compliance with the PSD limitations for PM on Kiln 3, and to test a representative baghouse on the roller mill/dryer operation to demonstrate compliance with grain loading limits contained in the permit.
28. The results of the most recent source tests are listed below:

Emission Device	Test Date	Fuel Type	Production Rate	Pollutant	Measured Value
Kiln 3	11/20/97	Used oil, 90% S	6.63 tons/hr	SO <sub>2</sub>	0.52 lb/ton 3.5 lb/hr
			297 ppm Cl	HCl	0.051 lb/ton 2.7 ppm-v
Kiln 3	7/12/01	Used oil	24,900 dscfm	HCl	0.025 lb/hr
		Landfill Gas	23,400 dscfm	HCl	0.06 lb/hr
Roller Mill/ Dryer #4	11/20/97	n/a	29.4 tons/hr 22,100 dscfm	PM	0.011 lb/ton 0.003 gr/dscfm
Roller Mill/ Dryer #4	4/28/98	Landfill Gas	30.5 tons/hr 7,920 dscfm	CO	0.03 lb/ton 0.91 lb/hr
				NO <sub>x</sub>	0.0009 lb/ton 0.03 lb/hr
				VOC	0.010 lb/ton 0.3 lb/hr
Hydrator	4/16/02	n/a	10.4 tons/hr	PM	0.009 lb/ton 0.09 lb/hr 0.018 gr/dscf

## PUBLIC NOTICE

29. Pursuant to OAR 340-216-0066(4)(a)(A), renewals of Standard Air Contaminant Discharge Permits require public notice in accordance with OAR 340-209-0030(3)(c). The permit was placed on public notice from December 17, 2003 to January 26, 2004. No comments were received.

ka:ed  
 2/12/2004



# Oregon

Theodore Kulongoski, Governor

Department of Environmental Quality  
Northwest Region Portland Office  
Air Quality Program  
2020 SW 4<sup>th</sup> Avenue, Suite 400  
Portland, OR 97201-4987  
(503) 229-5554  
FAX (503) 229-5265  
TTY (503) 229-5471

FEB 17 2004

Ash Grove Cement Company  
Attn: Glen Dollar  
13939 N. Rivergate Blvd.  
Portland, Oregon 97203

Re: Renewal of Air Contaminant Discharge  
Permit # 26-1891

The Department of Environmental Quality has completed processing your renewal application for an Air Contaminant Discharge Permit. Based on the material contained in the renewal application we have issued the enclosed permit.

The effective date of the permit is the date it was signed by the regional Air Quality Manager. The signature and date appear on the first page of the document. The permit is issued pursuant to Oregon Revised Statutes 468A and Oregon Administrative Rules (OAR) 340-14-005 through 340-14-050, and 216-0010 through 216-0100.

You may appeal conditions or limitations contained in the attached permit by applying to the Environmental Quality Commission, or its authorized representative, within twenty days from the date of this letter. Appeals are pursuant to ORS Chapter 183 and OAR Chapter 340, Division 14-025(6). Appeal procedures are contained in OAR Division 11-005 through 11-140.

A copy of the current permit must be available at the facility at all times. Failure to comply with permit conditions may result in civil penalties. **You are expected to read the permit carefully and comply with all conditions** to protect the environment of Oregon.

If you have any questions, please contact Kathy Amidon at (503) 229-5568.

Sincerely,

~~Ed Druback~~  
Audrey M. O'Brien  
Air Quality Manager  
Northwest Region

EJD cab  
Enclosure

Cc: Michelle Butler/AQ  
Rindy Ramos - Region X  
KA/NWR





# Oregon

John A. Kitzhaber, M.D., Governor

## Department of Environmental Quality

Northwest Region  
2020 SW Fourth Avenue  
Suite 400  
Portland, OR 97201-4987  
(503) 229-5263 Voice  
TTY (503) 229-5471

AUG 30 2000

OFFICE OF AIR

AUG 28 2000

File:

☒ Env/comp  
☐ TV Application  
☐ TV Activity  
☐ Other

Ash Grove Cement Company  
13939 N. Rivergate Blvd.  
Portland, OR 97203

Re: Air Contaminant Discharge Permit  
Addendum No. 1  
Permit # 26-1891

The enclosed permit addendum revises your permit referenced above and became effective the date it was signed by the Regional Air Quality Manager.

Should you disagree with the content of the addendum, you may make appeal to the Environmental Quality Commission, or its representative, within the next twenty days. Appeals are pursuant to ORS (Oregon Revised Statute) Chapter 183 and OAR (Oregon Administrative Rule) Chapter 340, Division 14-025(6). Appeal procedures are contained in OAR Division 11-005 through 11-140. The enclosed addendum is issued pursuant to ORS 468A and OAR 340-14-040.

A copy of the current permit must be available at the facility at all times (Condition G2). Failure to comply with permit conditions may result in a civil penalty. You are expected to read the permit carefully and comply with all conditions to protect the environment of Oregon.

Questions or comments should be directed to George Yun at (503) 229-5151.

Sincerely,

Audrey O'Brien  
Air Quality Manager  
Northwest Region

AOB: dlb

Enclosure

Cc: Michelle Butler/AQ  
Rindy Ramos/EPA - Region X  
George Yun/NWR



## AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality  
Northwest Region  
2020 SW 4th Avenue, #400  
Portland, Oregon 97201  
(503) 229-5554

This permit is being issued in accordance with the provisions of ORS 468A.040 and based on the land use compatibility findings included in the permit record.

ISSUED TO:

Ash Grove Cement Company  
13939 N. Rivergate Blvd.  
Portland, OR 97203

INFORMATION RELIED UPON:

Application No.: 17713  
Date Received: 9/21/1999

PLANT SITE LOCATION:

13939 N. Rivergate Blvd.  
Portland, OR 97203

LAND USE COMPATIBILITY FINDING:

Approving Authority: City of Portland  
Approval Date: 01/07/1997

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

  
Audrey O'Brien, NWR Air Quality Manager

AUG 28 2000

Dated

Source(s) Permitted to Discharge Air Contaminants:

TYPE OF FACILITY (OAR 340-216-0090)	TABLE 4 No.	SIC CODE
Lime Manufacturing	40	3274
Synthetic Minor	I.(G)	

ADDENDUM NO. 1

In accordance with OAR 340-14-040, Condition 24 of Air Contaminant Discharge Permit 26-1891 now read as follows:

24. The permittee shall only burn gaseous fuel (i.e., natural gas, landfill gas, liquefied petroleum gas) in the Roller Mill/Dryers.



Department of Environmental Quality  
Northwest Region  
Air Quality Program

**AIR CONTAMINANT DISCHARGE PERMIT  
ADDENDUM NO.1 REVIEW REPORT**

Ash Grove Cement Company  
13939 N. Rivergate Blvd.  
Portland, OR 97203  
(503) 286-1677

Source Test	Compliance Schedule	Report				Excess		NSPS	NSR	PSD	NESHAP	Size	Public Notice
		A	S	Q	M	R	N						
		X	X			X						SM	

1. This Permit Addendum No.1 is a modification for an existing Air Contaminant Discharge Permit (ACDP) 26-1891, which was issued on September 2, 1997 and is scheduled to expire on July 1, 2003. The permittee requested to use landfill gas in the Aggregate mill. Landfill gas is piped from Metro St. John's landfill, and it would be flared instead if not beneficially used by Ash Grove.
2. The Plant Site Emissions Limit (PSEL) is not being increased at this time, and no public notice is required. No new applicable requirements have been triggered. The permittee can continue to utilize the monitoring, recordkeeping, and reporting requirements in the existing permit.



# Oregon

John A. Kitzhaber, M.D., Governor

## Department of Environmental Quality

Northwest Region  
2020 SW Fourth Avenue  
Suite 400  
Portland, OR 97201-4987  
(503) 229-5263 Voice  
TTY (503) 229-5471

MAR 05 1998

ASH GROVE CEMENT COMPANY  
13935 N. RIVERGATE BLVD.  
PORTLAND, OREGON 97203

MAR 9 1998

RE: ISSUANCE OF AIR CONTAMINANT  
DISCHARGE SPECIAL LETTER PERMIT  
PERMIT NO. 26-1891

OFFICE OF AIR

The Department of Environmental Quality has completed processing your application for an Air Contaminant Discharge Special Letter Permit. Based on the material contained in the application we have issued the enclosed permit.

The effective date of the permit is the date it was signed by the Regional Air Quality Manager. The signature and date appear on the second page of the document. The permit is issued pursuant to Oregon Administrative Rule (OAR) 340-14-050 which authorizes the Department to waive normal procedures as needed to address unique or emergency conditions.

You may appeal conditions or limitations contained in the attached permit by applying to the Environmental Quality Commission, or its authorized representative, within twenty days from the date of this letter. Appeals are pursuant to ORS Chapter 183 and OAR Chapter 340, Division 14-025(6). Appeal procedures are contained in OAR Division 11-005 through 11-140.

A copy of the current permit must be available at the facility at all times (Condition G2). Failure to comply with permit conditions may result in civil penalties. **You are expected to read the permit carefully and comply with all conditions** to protect the environment of Oregon.

If you have any questions, please contact Kathy Amidon at (503) 229-5568.

Sincerely,

Ed Druback  
Air Quality Manager  
Northwest Region

ED:slh

Enclosure

cc: Terri Sylvester/AQ  
Dave Kauth/AQ  
EPA - Region X  
K Amidon/NWR

USEPA REG



0000418

**Special Permit to Operate**  
Effective March 15 to May 14, 1998



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<b>Operator:</b>	Ash Grove Cement Company 13935 N. Rivergate Blvd. Portland, OR 97203	Contact: Gary Wright Phone: 286-1677 ACDP No. 26-1891
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<b>Location:</b>	13935 N. Rivergate Blvd. Portland, OR
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<b>Equipment/ Process:</b>	The company proposes to combust land fill gas from St. Johns Landfill in its agricultural lime process to test the efficacy of the process and quantify emissions. If the test is successful, the landfill gas will be combined with natural gas and combusted in the roller mill dryers.
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<b>Anticipated emissions:</b>	The proposed test will be used to quantify emissions from burning landfill gas. A combination of landfill gas and natural gas may also be tested, if desired.
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<b>Unique circumstance:</b>	No other facility in this area combines landfill gas and commercial natural gas for combustion as part of a manufacturing process.
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<b>Authorization:</b>	OAR 340-14-050 authorizes the Department to waive normal procedures as needed to address unique or emergency conditions.
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<b>Special Conditions:</b>	The source test will be conducted in accordance with current permit conditions, including submittal of a test plan 15 days in advance of the test.
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<b>Period covered:</b>	This special permit is effective March 15, 1998 to May 14, 1998 and authorizes the combustion of landfill gas as part of the on-site processes.
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Special Permit to Operate  
Effective March 15 to May 14, 1998

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DEQ Contact: The Department contact for the effective period shall be:

Kathy Amidon  
(503) 229-5568

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FOR THE DEPARTMENT OF ENVIRONMENTAL QUALITY:



MAR 05 1998

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Ed Druback, Air Quality Manager, Northwest Region

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